Public School Programs

1984-85
1985-86

Procedures, Services, Publications
Program and Course Descriptions

Nova Scotia

Department of
Education

Halifax 1984

Public School Programs

1984-85
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Procedures, Services, Publications
Program and Course Descriptions

Published by Authority of the Minister of Education

"The Minister may from time to time publish in such manner as he thinks fit a description of the courses of study, text books and related material, as from time to time prescribed by the Minister, and such administrative instructions and orders as he deems necessary for the effective use of such courses, text books, and related material."

— from Regulations Pursuant to
Section 3 of the Education Act

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Part 1

[illegible]

Programs and course descriptions within each program are listed in alphabetical order and ascending order of grade from Primary to Grade 12.

Reference should be made to *lists of authorized instructional materials, of various levels and for various special uses,* that are available through the School Book Bureau within the credit allocation system. In authorizing materials for this list, first consideration has been given to materials written and published by Canadians. In general, consideration must then be given to Canadian materials using the following definition.

A book is considered to be Canadian if it is:

a) written, designed or produced by a Canadian, or is
b) about Canada or presents a Canadian perspective or is designed to meet Canadian needs, AND is
c) published in Canada.

Notwithstanding the above definition, consideration should be given to material which is

d) edited and/or translated by a Canadian
e) manufactured in Canada.

Supplementary bulletins and other requested guidance may be provided by Curriculum Development, Department of Education.

Art Education

Teaching Guides

Art, Primary to Six (No. 20, 1977)
Art, Grades 7-9 (No. 21, 1977)
Art, Grades 10-12 (No. 43, 1979)

Supplementary Documents

Nova Scotia School Television Program Teaching Guide for Art, Levels 2 and 3
Nova Scotia School Television Program Teaching Guide for Art, Levels 4-6
Primary-3 Supplementary Document No. 37, 1982
4-6 Supplementary Document No. 40, 1983

Program and Course Descriptions

Primary Grade Through Grade 6

At the primary to grade 3 levels, children should have many opportunities to explore and experiment with the media and techniques of art. In levels 4 through 6, students should be given more specific direction and instruction relating to the art skills and techniques. Children should be encouraged to solve problems creatively through activities designed to challenge.

During elementary school years, the program will provide a selection of increasingly complex experiences in various aspects of the visual arts including all of: drawing, painting, printmaking, sculpture, fibre (weaving, stitchery, applique, macrame, batik), puppetry, audio-visual, art appreciation, design and group activities such as murals. These experiences will be selected according to the needs, interests, and possibilities opened up by the nature of the environment and of the children and teachers concerned.

Grades 7-9

The art program follows a thematic approach to give structure and order to the various skills, techniques and processes that are an inherent part of any art curriculum. The program has been divided into four major concept areas: self, social interaction, environment, and cultural heritage. Through this approach, teachers and students can develop a distinctive, yet inter-related understanding and awareness of the value of art in our daily lives.

The program developed by the teachers should encompass each of the four concept areas at each grade level. A sequential and developmental approach to the exploration of media skills and techniques should be considered when the teacher is planning the total junior high art program.

The art media that may be incorporated into the 7-9 art program are: drawing, painting, printmaking, photography, ceramics, textiles, sculpture and architecture. The various media should be explored through the four concept areas depending on the facilities of the school, the interests of the students, and the experience of the teacher.

Grades 10-12

GENERAL NOTE
The aims of the high school art program include the development of visual perception and awareness, skill and confidence in artistic endeavors, skill in using art materials and in solving problems in the visual arts, and the understanding of art including the ability to analyse and interpret art history.

ART 321 (ART 321)
The first year high school art course should concentrate on the development of basic art skills and understanding of the core content of drawing and design, painting, sculpture, printmaking, art history and no more than two optional units from mixed media, pottery, photography, crafts, fibre/textiles. Drawing, design and art history should relate to every aspect of the year's work because they are basic to the development of concepts and future studies in art.

ART 331 (ART 331)
At this level the concentration on drawing/design and art history should be continued with further development of skill and ability in the other core components of painting, printmaking and sculpture. Increased time is suggested for the optional units to allow students to acquire greater understanding of the processes.

ART 341 (ART 341)
At this level the student should have the opportunity to work in depth in selected areas of the program. Specialization should be encouraged. Drawing, design and art history are the two specified components with *one* additional chosen from painting, printmaking and sculpture, and *one* from the optional list.

Business Education

Teaching Guides

Accounting (No. 54, 1980)
Business Communications (No. 66, 1980)
Business Mathematics (1984)
Business Organization and Management (No. 62, 1980)
Consumer Education (No. 25, 1977)
Law (No. 10, 1978)
Office Procedures (No. 55, 1980)
Recordkeeping (No. 56, 1980)
Shorthand and Transcription (No. 57, 1980)
Typewriting (No. 58, 1980)
Introduction to Word Processing (Supplementary Document No. 46, 1983)
Data Processing (Draft Outline 1984)

Program Descriptions

There are two phases of business education: individual business courses and business sequences. Each has a definite purpose and each may play an important part in the achievement of the general aims of education. Individual business courses are designed to contribute to basic education for all students, regardless of career plans, and business sequences are intended to prepare students for business and office occupations.

As part of the High School Completion Program, schools which have business education departments may offer *accounting, clerical,* and *stenography* sequences.

The Accounting Sequence is designed to prepare students for employment in accounting and related business occupations. Instruction is intended to develop a basic understanding of modern accounting procedures applicable to single proprietorships, partnerships, and corporations.

The Clerical Sequence is designed to prepare students for employment as clerk-typists, general office clerks, file clerks, office machine operators, receptionists, and other related occupations. Instruction includes typewriting, machine operation, record-keeping, filing, clerical routines, and business techniques.

The Stenographic Sequence is designed to prepare students for employment in office occupations which require stenographic skills. In addition to developing typewriting, shorthand, and transcription abilities, students will have an opportunity to develop skills in machine operation, filing and business techniques.

Generally these sequences should include the following.

Accounting Sequence

English	421 or 221	431 or 231	
Business Communications (English)			BUE 241
Mathematics	421, 221	or BMA 231	
*Typewriting	321		
Accounting		331	341
Law			341
*Office Procedures			241

Seven optional subjects from the High School Completion Program.

Clerical Sequence

English	421 or 221	431 or 231	
Business Communications (English)			BUE 241
Mathematics	421, 221	or BMA 231	
*Typewriting	321	231	241
Consumer Education	321		
Record Keeping	221		
or Accounting		331	
*Office Procedures			241

Six additional subjects from the High School Completion Program. Care should be taken that students include a course which fulfils the Canadian studies requirement.

Stenography Sequence

English	421 or 221	431 or 231	
Business Communications (English)			BUE 241
*Typewriting	321	231	241
*Shorthand		231	
*Shorthand Transcription			241
*Office Procedures			241
Accounting		331	

Six additional subjects from the High School Completion Program. Care should be taken that students include a course which fulfils the Canadian studies requirement.

**Rooms with typewriters (and in Office Procedures, business machines as well) must be available.*

Course Descriptions

ACCOUNTING 331 (ACC 331)

The aims of the high school accounting courses are: (1) to develop an understanding of accounting principles and concepts encountered in business and personal activities; (2) to provide a sound foundation for additional study; (3) to become acquainted with the principles, applications, and importance of data processing in accounting procedures.

The following topics are covered in the introductory course: the accounting equation, analysis of business transactions, journalizing and posting, processing cash receipts and payments, financial statements, and the complete accounting cycle for a merchandising firm.

ACCOUNTING 341 (ACC 341)

Prerequisite: Accounting 331

The advanced course in accounting deals with more complex transactions and financial statements. Topics include: automated accounting systems, payroll accounting, cost accounting, budget accounting, taxation accounting, partnership accounting, corporation accounting, financial statement reporting, and analysis of corporate financial reports.

BUSINESS COMMUNICATIONS (English) 241 (BUE 241)

This course meets the requirements for a third-level English credit. It may also be elected by a second level student.

The fundamentals of English grammar, usage and punctuation are emphasized. Effective reading, listening, speaking, and writing skills are developed and improved. The course includes the composition of a variety of business letters, memoranda, telegrams, and current trends in business communication. Appropriate word processing skills may be advanced in this course.

BUSINESS ORGANIZATION AND MANAGEMENT 341 (BOM 341)

This course includes the structure of Canadian businesses, principles of management, the functions of marketing, personnel, production, advertising and finance as well as an overview of current trends in Canadian business management. It presents an overview of the different facets of business organizations in Canada in a managerial context. Emphasis is placed on questions, projects and the case study approach. Field trips and simulated management situations are an important part of the course. Students are provided with some indication of the types of environment within which those in managerial positions must operate. Business organization and management is considered a Canadian studies course for the purpose of satisfying the compulsory Canadian studies requirement for a High School Completion Certificate.

CONSUMER EDUCATION 321 (CED 321)

This course introduces the student to the problems of today's consumer citizen. Course content includes: sources of consumer protection, advertising and the consumer, principles of good buying, investing in housing, money management, savings and investments.

DATA PROCESSING 341 (DAP 341)

This is an introductory course in computer data processing. Designed to be taught with the use of microcomputers, the course addresses the three main activities of data processing: capturing the input data, manipulating the data, and managing the output. Specific topics include the data processing cycle, hardware and software, records management, data communications, and business applications such as accounting, word processing, data base management, and financial spreadsheet programs. This course also includes a brief introduction to programming using the BASIC language.

This course is recommended for those students completing the business education program and others who would find a course in data processing of value and interest as part of their high school completion program.

LAW 341 (LAW 341)

The Canadian law course is designed to provide students with: (1) a knowledge of law and its function in society, and (2) the attainment of skills and attitudes that will enable students to understand the process of law. Course contents include the Canadian legal system, crimes and crime control, injuries and wrongs, human rights, property rights, promises and agreements, business relations, family relations, courts and trials. The course may be considered as belonging to either business education or social studies, and should be taught by the person best qualified to teach, and interested in teaching, about law. Law 341 is considered a Canadian studies course for the purpose of satisfying the compulsory Canadian studies requirement for a High School Completion Certificate.

BUSINESS MATHEMATICS 231 (BMA 231)

The business mathematics course is designed to reinforce basic mathematical concepts and skills by providing students with experience in applying them to typical business situations. The course has been changed from the grade 10 level to grade 11. With this change in placement has come a revision that has been designed to complement both the changing demands of business and revisions made to other math courses, particularly MAT 221. It is recommended that students have a 10-level math credit from the previous year.

Beginning with a review of fundamentals, the course emphasizes a problem solving approach to such topics as budgeting, financial planning, banking and credit, employee compensation, merchandising transactions, investments, business report analysis, and managerial mathematics. The efficient use of the calculator and, where possible, the computer as computational tools should be emphasized in this course.

OFFICE PROCEDURES 241 (OFP 241)

Office Procedures is a laboratory course which identifies the varied activities of a business office. Its objective is to prepare students for office employment by developing integrated office skills to business and vocational use levels.

Course content includes: office organization, human relations, communications (personal, telephone, mail, telecommunications), filing, office machines, machine dictation and transcription, data processing, word processing — both concepts and applications, and job preparation. A field placement in an actual office is recommended.

RECORD KEEPING 221 (REC 221)
The course is designed for students who want skills and knowledge of the common business forms for personal use or for clerical activities in which basic records are kept.

It will enable the student to set up and keep simple records for personal use, family use, a social club, or a very small business. Areas of study include: personal record keeping, record keeping procedures, business record keeping, and the basic elements of accounting.

SHORTHAND 231 (SHD 231)
The primary aim of the shorthand and transcription courses is to develop the ability to take dictation and produce mailable transcripts with sufficient speed and accuracy to meet office standards.

Regardless of the shorthand system taught, transcription begins early in the introductory course in order that the students may be able to transcribe accurately and quickly shorthand notes that have been written at the *minimum* rate of 60 words a minute. Students should be able to transcribe the dictation at a minimum rate of 10 words a minute with 95 per cent accuracy.

SHORTHAND TRANSCRIPTION 241 (SHD 241)
Prerequisite: Shorthand 231

This is an advanced course with emphasis on transcription skills and good work habits. The objectives are as follows: (1) ability to take dictation from new material at rates varying from 90 to 120 words a minute, graded on the basis of mailability; (2) ability to transcribe at speeds from 15 to 25 words a minute; (3) ability to proofread with absolute accuracy.

INTRODUCTORY TYPEWRITING 321 (TYP 321)
The introductory course in typewriting is designed to introduce the student to the touch typewriting method with particular emphasis on correct techniques. It is an open elective to all students — business and non-business — and is not vocationally oriented in itself. In addition to covering the complete keyboard, the course includes drills on sentences, paragraphs, centring, tabulation, manuscripts, letters, and composition at the typewriter. This introductory typewriting general interest course may also be taken at the grade 11 or 12 levels in which case it should be designated Introductory Typewriting 331.

A prerequisite of a passing grade of 50 per cent or better in TYP 321 AND a minimum average of 35 to 40 wpm with five or fewer errors on at least three, five-minute timed writings with a normal syllabic intensity is required for admission to the intermediate level of typewriting.

INTERMEDIATE TYPEWRITING 231 (TYP 231)
Prerequisite: Typewriting 321 (including speed requirement)

The aim of the second course in typewriting is to provide the student with the opportunity to acquire an intermediate level vocational skill. The student will (1) demonstrate a refinement and development of the technique of typewriting and knowledge of machine operations; (2) demonstrate good quality production and efficient work habits in vocational typewriting; (3) produce typewritten material with acceptable standards of speed and accuracy for the intermediate level. This typewriting course may be used to help students acquire skills in word processing.

A prerequisite of a passing grade of 50 per cent or better in TYP 231 AND a minimum average of 45 to 50 wpm with five or fewer errors on at least three five-minute timed writings with a normal syllabic intensity is required for admission to the advanced level of typewriting.

ADVANCED TYPEWRITING 241 (TYP 241)
Prerequisite: Typewriting 231 (including speed requirement)

The aim of the third course in typewriting is to provide the opportunity for all students to gain an entry-level marketable skill prior to leaving high school. The development of a competency in the production of mailable typescript in accordance with the standards and expectations of industry is a priority. The teaching of word processing skills may be introduced or further advanced in this level of typewriting.

A passing grade of 50 per cent or better AND a minimum average of 55 to 60 wpm with five or fewer errors on at least three five-minute timed writings with a normal syllabic intensity would be required for credit purposes.

Special One-Year Business Education Program

Note: Students must have accumulated a minimum of ten high school credits prior to enrolling in the special one-year business education program.

In addition to the business courses available in the High School Completion Program, special accounting, clerical and stenography courses may be offered to high school graduates or students who have completed a minimum of ten high school credits. These courses are vocational in nature and they are designed to prepare students for immediate employment.

Subjects	**Accounting Sequence**	**Clerical Sequence**	**Stenography Sequence**
Accounting	331 & 341	331	331
English — Communications	BUE 241	BUE 241	BUE 241
*Office Procedures	241	241	241
Mathematics	BMA 231	—	—
*Typewriting	—	321 & 231 or 231 & 241 (double period)	321 & 231 or 231 & 241 (double period)
*Shorthand	—	—	231 & 241 (double period)

Electives: In both the accounting and clerical sequences **one** additional optional subject is to be selected.

In the special one-year business education program, those subjects which are programmed on a two-period-a-day basis may receive up to two credits as follows:

Subject	**Course**	**Credits**
Accounting	1-Yr. Accounting	Accounting 331 & 341
Shorthand	1-Yr. Stenography	Shorthand 231 & 241
Typewriting	1-Yr. Clerical	Typewriting 321 & 231 OR 231 and 241
	1-Yr. Stenography	Typewriting 321 and 231 OR 231 and 241

Credits in the above areas will be given only if the student has not already received credit for previously completing any of these subject areas.

Sometimes a student does not meet the standards required for successful completion of these subjects. If this occurs when these subjects are programmed on a two-periods-a-day basis, a student will, more often than not, have completed more than enough work to have met the requirements for a passing grade in the elementary levels of these subject areas. Credit would then be awarded as follows:

Subject	**Course**	**Credit**
Accounting	1-Yr. Accounting	Accounting 331
Shorthand	1-Yr. Stenography	Shorthand 231
Typewriting	1-Yr. Clerical	Typewriting 321 or 231
	1-Yr. Stenography	Typewriting 321 or 231

Credit in these areas will only be given if the student has met the required standards for the elementary level in the subject area and has not already received credit for previously completing any of these subject areas.

**Rooms with typewriters (and in Office Procedures, business machines as well) must be available.*

Career Education

CREATING A CAREER (CAC 331)
Creating a Career is designed to help students acquire knowledge and skills in occupational exploration, career decision-making, and job search.

In the Career Planning section of the course, students will learn to identify their own strengths, interests and aptitudes. They will explore a wide variety of occupations in relation to their personal preferences and to the implications for further training and education.

The Job Search section concentrates on "job seeking" and "job keeping" skills. Students will develop decision-making skills and learn how to write resumés and prepare for an interview.

Driver Education

This non-credit course must consist of three parts: a classroom phase, a behind-the-wheel phase, and an in-car observation phase.

The classroom phase shall consist of a minimum of 30 hours.

The "behind-the-wheel" phase shall consist of eight hours for automatic transmission or ten hours for standard transmission.

The "in-car" observation phase must be a minimum of 12 hours.

N.B. It is suggested that students should be encouraged to wait until the behind-the-wheel phase (minimum of eight hours) has been completed before applying for the provincial driving test.

English: Language Arts

Teaching Guides

Elementary Language Arts: An Overview (No. 28, 1980)
Drama in the Elementary School (No. 2, 1972)
Manuscript and Cursive Writing in the Elementary School (No. 11, 1971)
Learning About Language in the Elementary School (No. 36, 1978)
Literature in the Elementary School (No. 24, 1978)
Let's Plan for Oral Language Development in the Elementary School (No. 24, 1977)
Let's Plan for Improved Listening in the Elementary School (No. 23, 1978)
Writing in the Elementary School (No. 29, 1979)
Spelling 2 to 8 (No. 26, 1978)
Reading in the Elementary School: Responsibilities of Personnel in Teaching Reading P-12 (No. 29, 1978)
English Language Arts 7-12 (No. 79, 1983)
Drama in Education — The Junior High Years (1984)
The Novel in Junior High School (No. 7, 1974)
Media — An Outline for Study (No. 3 1971)
A Guide to English Language Study (No. 5, 1972)
Reading Across the Curriculum 7 to 9 (No. 29, 1978)
Language and Learning Across the Curriculum (No. 26, 1980)
Notes and Suggestions for Teachers of High School English (No. 13, 1969)
The Novel in Senior High School (No. 3, 1969)

Developmental Drama/Theatre Arts (No. 5, 1977)
Guidelines For The Teaching of Canadian Literature (English 442) (No. 78, 1982)
Adjusted Program (Academic) — English Language Arts (No. 65, 1980)
ETV Guide for English Language Arts — The Story Machine, Levels P, 1, 2
ETV Guide for English Language Arts, Levels 4, 5, 6

Program and Course Descriptions

Primary Through Grade 6

Language plays a vital role in shaping individual growth, as well as in developing patterns of thought and social interaction. To meet the individual and developing language needs and interests of children, the language arts program has an activity-centred communications emphasis. Since language growth depends on language use, the program provides for a wide range of experiences involving children in meaningful, practical, and creative uses of language.

The essential language arts, or communication skills, are commonly classified as:

speaking and listening
reading and writing

The communications arts extend to the expressive or productive (speaking, writing) and the receptive (listening, reading) areas of language and include skills related to viewing, presenting, and, most importantly, thinking and understanding. The special areas to be emphasized consist of reading, oral and written expression, listening, spelling, and handwriting and each must be treated as part of a complex but unified developmental program. To help ensure the continuous progress of each child toward better and more satisfying use of all these processes or modes of communication, the planned program offered in each school and in each classroom should be well balanced and flexible.

OBJECTIVES
The objectives of the language arts program are large ones, encompassing effective speaking, listening, reading and writing; and included in these are the use of drama and media.

The overall program should ensure that all children are given the opportunity to:

- refine and extend their understanding of specific language strategies through continuing use;
- develop the ability to use language to create and express imaginative ideas and experiences;
- increase their enjoyment and critical awareness of literature so that they not only *can* read, but *will* read and enjoy reading;
- become increasingly able to read and write not only to express their thoughts and feelings through writing but to use the ability to read and write for many practical purposes;
- develop the ability to speak and listen effectively and use language confidently to create and express and to receive and interpret increasingly complex ideas, opinions and feelings;

- become increasingly capable of adapting language use to the particular needs of any situation including those in which standard English is required;
- begin in the later elementary years to develop a vocabulary for talking and writing about language;
- select learning resources geared to their reading, viewing and listening interest and ability levels making use of school libraries where available.

LISTENING AND SPEAKING

Oral communication is central to the entire language arts program. The authorized reading, and other language arts programs contain many suggestions for developing listening and speaking skills, since reading and writing are best developed through oral language.

READING

The reading program in the elementary grades is designed to provide the maximum opportunity for all students to learn to read with proficiency and pleasure. Care should be exercised in allocating students to classrooms, in arranging flexible grouping for instruction, and in planning for co-operative use of instructional materials.

In addition to the basal reading materials, additional novels, kits, and related resources are recommended. A key aim of reading instruction is to develop lifelong readers. Reading for enjoyment and for other personal purposes should thus be a central aim of classroom instruction. It is expected that all teachers will, when planning their programs, include the reading aloud of children's books and poems as an integral part of language development.

In many elementary schools there are recognized needs for special reading services and programs not ordinarily feasible within the classroom situation. In addition to the *List of Authorized Instructional Materials, Elementary School* there is a further list entitled *List of Authorized Instructional Materials Special Reading Needs, Special Education*. This second list is recommended primarily for use by reading specialists, although some items may prove useful for more general use, particularly by teachers who can obtain supportive assistance from reading specialists or supervisory personnel.

WRITING, LANGUAGE STUDY, SPELLING

Writing is increasingly recognized as having three major phases: prewriting, writing, and rewriting. Prewriting includes every preparatory activity that takes place before the writing of the actual composition begins. Discussion of stories in the classroom reading material and other authorized language arts resource material can help to generate some of the ideas needed at this stage. It is at the rewriting stage, especially for older elementary students, that particular attention should be given to spelling and clarity of language, and the mechanics of writing.

Children's growth in language and thought is enhanced by extensive use at all levels of oral language both in formal and informal situations, through developmental drama and through literature read primarily for enjoyment. Through both language and literature, students can grow toward self-discovery and self-understanding, as they use language in increasingly complex ways to explore and express their world.

Manuscript writing (printing) is recommended for all beginning writers, with care to be taken that the shift to cursive writing is undertaken only after the student has clearly demonstrated readiness to make such a transition.

An effective language arts program is characterized by flexibility and balance. All aspects of the language arts program should receive equal attention in program planning, bearing in mind that oral language is the foundation for all other aspects of language arts and is valuable for its own sake, since so much communication is oral.

Some concerns to be considered in ensuring a flexible and well balanced language program include:

- balanced attention to all aspects of language arts
- appropriate ratio of formal to informal learning
- adequate attention to oral as well as written activities
- appropriate ratio of teacher talk to pupil talk
- opportunities for children to use language to think out loud, to explain, to shape an imaginative idea

Language is central to all learning and the language arts program is therefore the key to the total elementary school program.

Grade 7-9

The language arts program in junior high school is an extension of the elementary language arts as described on pages 19-21. The focus of the program will continue to be on the essential communication skills of

speaking *listening* *reading* *writing*

and, above all, *thinking*.

Related processes to be developed will include:

observing or viewing *presenting* *dramatizing*.

Although the aims that follow are related specifically to thinking, listening, speaking, reading, writing, viewing and valuing, it should be understood that the language arts program is an integrated, balanced language program and that each course must be taught as a whole and not in isolated units.

The aims of the program at this level are to develop the students' ability to use language to:

- think
- listen
- speak
- read
- write
- view effectively
- discriminate

It is expected that most students will learn the basic skills of communication in the elementary grades, and that these skills will be further developed and refined in the junior high school program. Since the students' abilities and experiences are not equal upon entering elementary school, and since each child learns at an individual pace, no completely acceptable standard can be established for all students at any grade level. For this reason, students' strengths and weaknesses must be known and carefully considered when objectives are set.

The junior high school will continue to provide opportunities for experimentation, exploration, expansion, and practice, but will also include opportunities for studying language arts as a formal discipline. Much of the program in grade 7 and in the junior high years that follow will emphasize language skills of a public and social nature. These skills are not, however, to be viewed in isolation: the teacher must understand that the private, developing, personal world of the student cannot be ignored; that the student's need to grow in sensitivity must be nurtured.

The responsibility for the teaching of reading does not belong solely with elementary teachers. The elementary school lays the foundation for reading, but the strategies needed to achieve maturity in reading must be taught in junior and senior high school. All teachers are encouraged to work with their classes in developing students' reading in their specific subject areas. Students should be helped to acquire the mature reading abilities and study skills needed for critical reading. Students should use textbooks, dictionaries, magazines and newspapers and other resource materials so that they can learn to read diverse materials as intelligently and critically as possible.

Specialized reading instructional materials to assist in developing support materials for the junior high can be found on the *List of Authorized Instructional Materials for Specialized Reading Needs and Special Education, All Levels.*

Grade 7

At this grade level there is a continuation of concepts introduced in the elementary grades and concepts and skills necessary to the development of more sophisticated language competence in grades 8 and 9 are introduced.

Although the core of the grade 7 program is an integrated balance of listening, speaking, reading, writing and viewing, the teacher must at this stage recognize the need for a greater emphasis on reading and writing. Appreciably more than half of the time allotted to language arts should be spent on developing fluency in reading and writing. The balance of class time should be available for related activities fundamental to the students' continuing growth in their ability to use and appreciate language.

The grade 7 program should promote growth in the following areas:

Oral Communication — emphasis on articulation, listening to each other, building self-confidence and tolerance of others' ideas; use and appreciation of improvisation and role playing to explore elements of drama;

Reading — emphasis on developing as a mature reader with specific attention to reading in the different subject areas.

Literature — emphasis on study of novel, short story, poetry, and non-fiction as literary forms.

Writing — emphasis on development of a wider and more flexible writing vocabulary including knowledge of spelling of conventional words, use of sentences of varying degrees of complexity, matching the kind of language use to purpose and audience, use of the varied compositional forms of language in writing, developing the habit of evaluating one's own writing and diagnosing one's own writing problems, writing announcements for school and community use, writing simple and unrhymed poems;

Language Study — emphasis on nonverbal and oral communication, origins of language, figurative and humorous language, vocabulary development, dialects, word classes and sentence structure, punctuation and capitalization;

Media — increasing the students' awareness of the newspaper and its influence;

Study Skills — locating and becoming familiar with a great variety of sources of information including personal experiences, experiences of others, dictionaries, simple thesauruses, encyclopedias, newspapers, and using titles, subtitles, pictures, and graphs, effectively;

Drama — development of each student's personal potential and individual resources; acquisition of an understanding of self and one's relationship to others; constant practice of the students' communication skills.

Grade 8

Grade 8 is a year of consolidation, expansion, and further discovery for the student and the teacher.

The emphasis in grade 8 is on development of the students' ability to communicate and interact more effectively with their peers and with adults.

Group discussion, oral, written, and visual presentations are important at this level in the program.

The students must continue to develop those language skills which are essential to continued language growth. At this level, for example, students should be capable of demonstrating considerable ability in correcting spelling, punctuation, usage, and also in revising and improving drafts of their own writing. The percentage of time allocated for reading and writing activities should again be more than half of the total time allotted to language arts.

The grade 8 program should promote growth in the following areas:

Oral Communication — emphasis on organizing ideas, analysing and solving problems, reaching consensus, role of leader, interviews;

Reading — emphasis on reading for pleasure, getting information and reading across the curriculum.

Literature — emphasis on study of novel including attention to character, setting, plot; study of a variety of forms of poetry including ballads, limericks,haiku, cinquain, study of nonfiction including biographies, autobiographies, diaries and journals, study of mythology through use of personal and community stories, fairy tales, fables and legends, interpreting aspects of literature through improvised drama;

Writing — emphasis on writing sentences of varying complexity, writing multi-paragraph compositions such as letters and reports, using expressive transactional and poetic forms of the language, demonstrating ability to use rules of capitalization and punctuation, using standard form of handwriting and accepted forms of spelling, editing own writing to correct errors in usage, syntax, spelling, punctuation and capitalization, gathering and processing information for reports, paraphrases, or other written materials, writing brief reactions to novels;

Language Study — emphasis on nonverbal and oral communication, history of writing, types of communication, (relational, personal, institutional) vocabulary, dialects, word classes, sentence patterns and sentence expansion, structure, punctuation and capitalization;

Media — increasing awareness of magazines and their influences;

Study Skills — discriminating among the purposes of various sources of information including table of contents, bibiliographical information, index, appendices, preface, glossary, adjusting reading rate to purpose, making notes of main idea and supporting facts;

Drama — stimulation of the students' sense of inquiry and of their responsibility for their own learning; the utilization of the students' various senses; development of confidence in one's movement and speech; stimulation of self-discipline.

Grade 9

The focus of the grade 9 program is on the understanding and use of the standardized language code, and on more formal communication situations.

The grade 9 program should promote growth in the following areas:

Oral Communication — emphasis on preparation, researching topic, using support material.
Reading and Literature — emphasis on continued study of novel, short story, poetry and non-fiction so that students understand and appreciate the nature and value of these forms; study of mythology through fables, legends, reading of myths and writing of fables and myths; interpreting aspects of literature through improvised drama and more formal presentations;
Writing — emphasis on writing descriptive, narrative and expository paragraphs using varying organizational patterns, completing accurately forms such as business forms, application forms, and tax forms, applying proofreading skills with increasing competency, keeping journals, writing reports and commentaries, summarizing information and writing a variety of responses to books;
Language Study — emphasis on non-verbal and oral communication, review of origins of language and history of language and persuasive language, vocabulary development, dialects (influences on an individual's speech) word classes and sentence structure, clauses and tenses, punctuation and capitalization;
Media — increasing awareness of advertising and its influence;
Study Skills — discriminating among the purposes of specific sources of information, and identifying the biases associated with various other sources of information; using bibliographical information, appendices, indexes to reference materials, distinguishing fact from opinion, notetaking, outlining and summarizing;
Drama — creation and appreciation of dramatic art forms and development of positive attitudes towards the arts; learning to understand and interpret the history of artistic endeavor.

Adjusted Program English/ Language Arts 7-9

The major aims of the adjusted English language arts program are to develop the students' ability to use their communication skills in situations that occur in daily life and to develop in students attitudes of self-confidence in their use of language.

The three-year program should enable students to:

1. develop the communication skills of speaking and listening essential to social activity;
2. develop the ability to express ideas clearly in written form and thus to clarify and organize thinking about a given topic;
3. assess their language abilities realistically and thus build upon their strengths;
4. become more thoughtful users of the mass media including print and technological media;
5. develop study skills;
6. prepare themselves for the language demands of further learning.

Suggested topics to be developed during the three-year program include the study of novels, study of magazines, catalogues and newspapers, use of telephone and telephone directory, life skills involved in consumerism, banking and credit services and taxation.

Grades 10-12

The English program at senior high should continue to emphasize the development of the esential processes of communication: speaking, listening, reading, writing, viewing, presenting, dramatizing, and especially thinking. Aims for the senior high student will, however, be more complex, and the students will be expected to develop these skills to a higher level of sophistication and competence. They will also be expected to develop related skills such as those needed to describe, to explain, to argue, to narrate, to perceive accurately, to analyse clearly, to judge, and to select.

A variety of resources is listed for study in the senior English programs. While different aspects of English will be emphasized at different times and in different classes, it is expected that these aspects can be integrated into a balanced total program. Primary emphasis should always be on the students' need to develop their ability to communicate effectively through language.

The school library and its resources should be an integral part of the English program.

English 421, 431, 441

The objectives of these courses are to help the students improve their ability:

1. to use language in thinking, listening, speaking, reading and writing;
2. to value and enjoy literature;
3. to view critically films, television, and other media.

Senior High English Course Content

ENGLISH 421, 431, 441
These courses will include:
1. The reading and study of novels, short stories, essays, articles and other prose, poetry, and plays. Works ought to be chosen for their quality and appropriateness for the learners at each level, and should include significant literature from the past and present, some of which is Canadian.
2. The practice of the principles of effective writing in a variety of styles for a variety of purposes. The development of competence in language should be learned through purposeful language use, not through the working of formally taught exercises divorced from context. Regular well-planned practice in writing for every student, with the guidance and encouragement of the teacher, is the means by which skill in written English can be developed. With teacher guidance, students learn punctuation, spelling, and effective sentence and paragraph structure through writing and through the study of good writing.

3. The study of the conventions of written language, including the fundamentals of grammar and usage as they relate to writing, conventional spelling, punctuation and effective sentence and paragraph structure. The depth of study in these areas should be adjusted to the needs and abilities of the students at each level.
4. A variety of methods of evaluation by both the teacher and students. Encouragement and guidance by the teacher will assist each student to reach the best standard of oral and written expression of which that student is capable.
5. Systematic planning of the course for each grade to ensure a logical progression in areas of English which develop from year to year and the avoidance of repetition except for purposeful review and individual remedial work.

The requirements for these courses include the use of some instructional time for some of the following, as selected by the teacher: units on media; the detailed study of a particular literary genre or a current issue or theme; special emphasis on expository or creative writing; student research, independent study, or small group projects on topics of the students' or teachers' choice.

OVERVIEW CHART FOR ENGLISH 421, 431, 441

	421	431	441
Oral Communication	Emphasis on discriminating between fact and opinion appreciating differences in various speakers' voices, dialects messages	Emphasis on following order in speeches, repetition of ideas, persuasive influences, differences in dialect, developing confidence in giving demonstrations	Emphasis on ability to evaluate speakers' arguments and value of speakers' ideas and persuasive effect, ability to participate in parliamentary discussion
	421	431	441
Reading and Literature	Fiction — Novel Short Story Poetry Plays Nonfiction Mythology	Fiction — Novel Short Story Poetry Plays Nonfiction Mythology	Fiction — Novel Short Story Poetry Plays Nonfiction Mythology
Writing	Making notes of speech heard or passage read Expressing in writing an opinion Writing business and friendly letters Writing in forms such as exposition, narrative, fictional autobiography, paraphrase, precis, resume Completing various forms Developing a thesis on a given topic related to pieces of literature Writing short play scripts Writing research papers Editing and proofreading personal writing		
Language Study	Reviewing parts of speech Reviewing dictionary skills Studying paragraphs — form — function	Vocabulary development Study of synonyms, antonyms, sentence structure, verbals	Review of usage and mechanics Word Study Definitions
Media	Increasing awareness of use of television and its influences or broadening knowledge of television and its influences	Increasing awareness of the use of radio, records and their influences	Increasing awareness of the use of film and its influences
Study Skills	Review of study skills including outlining, summarizing, interpreting use of references, organizing and planning time use, note taking, setting the purpose for reading and writing		

ENGLISH 442: CANADIAN LITERATURE (ENG 442)

A senior level course in Canadian literature. English 442, may be offered as an option in schools where the enrolment justifies the offering of a second senior English course, in addition to the above-listed English 441, and where staff members are qualified and ready to present such a course. Successful completion of English 431 is the normal prerequisite for entrance into this course.

The four designs or approaches upon which teachers may build this course to meet student needs — generic, thematic, historical, and individual study — provide plenty of flexibility.

This course also includes units on French literature in translation, Nova Scotia literature, women in Canadian literature, and Native People in Canadian literature.

Students should be helped to understand that Canada has its own complex but distinctive literary tradition.

ENGLISH 221, 231, 241

It is especially important that these courses be based on the individual needs, interests, and abilities of the students. The program must provide activities that are related to the students' current lives and to the world that they will experience as adults. To be successful, the program must be perceived by the students to be relevant to their needs and interests.

The courses place emphasis upon:

- the affective responses
- the enjoyment of literature and language
- oral communications
- media study
- independent reading
- individual and small group work

These courses are designed for students whose needs differ from those of students enrolled in English 421, 431, 441. The students in English 221, 231, 241 are more likely not to pursue academic post-secondary education. Their needs lie in worthwhile endeavors that are not of an academic nature and that will allow them to have successful learning experiences.

Although these students have received exposure to language study during their junior high program, some may remain weak in the basic English language arts skills as measured by their performance on standardized tests, and in their speaking and writing as observed by teachers. These students may tend to lack confidence and competence in speaking within the classroom. Student differences must be a primary consideration in reading instruction. Differentiation of instruction must be geared to student differences, and must rest on continuing diagnosis of students' abilities and instructional needs.

These courses will include:

1. Many opportunities for students to develop fluency in oral language, through such experiences as individual presentations, impromptu talks, informal discussions and organized group discussions, interviews with members of the community, discussions related to the students' reading and writing activities, and role playing, in which students can explore the use of language in a variety of common occupational and social situations. Opportunities should be provided for dramatic expression and creative drama based on the students' experiences. These should provide students with motivation for using language effectively in a variety of situations.
2. Practical writing activities in which students attempt to use language for a definite purpose which they perceive as worthwhile — activities such as the writing of friendly and business letters; completions of forms; announcements for newspapers, editorials, minutes of meetings; summaries and precis, commentaries on public events, movies, and television programs.
3. Creative and personal writing activities based on the students' experiences, such as the keeping of a journal of observations, impressions, experiences, and responses to reading, television, radio, tape recordings, records, magazines, and newspapers.
4. The study of literature and language as used in media such as films, television, radio, tape recordings, records, magazines, and newspapers.
5. Activities which lead to discussion of the influence that the media exert on the students' lives, including practical involvement with the production of radio or television programs, and advertising in its various forms.
6. An independent reading program in which individual students select readings related to their own lives and interests.
7. The reading of a variety of literature, with an emphasis on the students' response to the ideas, feelings, characters, and themes of the work itself. Works should be chosen for their quality and appropriateness to the learners at each level, and should include significant literature from the past and present, some of which should be Canadian.
8. The study of the basic principles of the English language.
9. Opportunities to experience literary and cultural activities outside school.

Specific objectives of these courses are to help the students improve their ability:

1. to use language to think, listen, speak, read, and write;
2. to value and enjoy literature and language;
3. to view effectively and with discrimination, drama, film, television, and personal presentations.

OVERVIEW CHART FOR ENGLISH 221, 231, and 241

	221	231	241
Oral Communication	Emphasis on discriminating between fact and opinion, appreciating differences in various speakers' voices	Emphasis on following order in speeches, repetition of ideas, persuasive influences, developing confidence in giving demonstrations	Emphasis on ability to evaluate speakers' arguments, value of speakers' ideas and persuasive effect
Reading and Literature	Fiction — Short Story — Novels Plays Poetry Nonfiction Mythology	Fiction — Short Story — Novels Plays Poetry Nonfiction Mythology	Fiction — Short Story — Novels Plays Poetry Nonfiction Mythology
Writing	Outlining and writing multi-paragraph compositions for purposes of describing, informing, and persuading Journal and personal writing Written forms such as memoranda, summaries, reports, resumés, expository writing, and argument Commentaries Writing business and friendly letters Completing various forms Demonstrating ability to use rules of capitalization and punctuation, especially through editing own work		
Language Study	Reviewing parts of speech Reviewing dictionary skills Study of Paragraphs — form — function	Vocabulary development Study of synonyms, antonyms, sentence structure, verbals	Reviewing usage and mechanics Word Study Definitions
Media	Increasing awareness of use of television and its influences or broadening knowledge of television and its influences	Increasing awareness of the use of radio, records and their influences	Increasing awareness of the use of film and its influences
Study Skills	Review of selection and evaluation, organization, location of information, following directions, and specialized skills		

DRAMA 321: DEVELOPMENTAL DRAMA (DRA 321)
Developmental Drama is an elective credit course and does not fulfil the mandatory English requirement. It is an introductory course for students interested in drama and theatre arts, designed to develop the physical, emotional and intellectual resources of the individual student, with emphasis on concentration, sense awareness, imagination, physical control and social communication. The course content will include expressive movement, oral interpretation, improvisation and scripted plays. Different teachers will have different strengths and interests according to their backgrounds in drama and this course permits teachers to give special emphasis to those areas in which they consider themselves most competent. The major focus of the course is on improvised or creative drama, although some attention will be given to introductory aspects of play production.

DRAMA 331: THEATRE ARTS (DRA 331)
Theatre Arts is an elective credit course and does not fulfil the mandatory English requirement. Students will be presented with opportunities to discover principles of theatre through practical experiences in acting and play production. Class study will include the nature of drama, the anaylsis, interpretation and appreciation of plays (drawn from a range of media and styles), the writing of scenes and the evaluation of productions. Practical activities will include further work in developmental drama and improvisations as well as movement, voice production, the development of roles from scripts and the staging of short scripted scenes. Projects such as play-writing, student-prepared tapes, set designs for a particular play and diagrams for blocking scenes are included in this course.

Home Economics

Teaching Guides

Home Economics — A Program Guide (No. 2, 1977)
Home Economics: Exploring Childhood (No. 12, 1978)
Home Economics in Senior High School (No. 18, 1978)
Home Economics: Program Guide on Aging (No. 7, 1978)
Home Economics for Children and Youth With Exceptional Learning and Behavior Characteristics (No. 6, 1977)

General Notes

The home economics program has as a central purpose the development of the student's abilities to live congenially within a family unit and to function independently as an individual. The program is based on the concepts of

Management of human and material resources
Interpersonal relationships of peers, preschool-age children, adults and senior citizens
Values education related to self, advertising, consumerism, safety and nutrition.

Home economics deals with all aspects of the family, including a study of both historical and contemporary cultures.

From the suggested units the teachers will adapt the lesson concepts to the ability of the students. If a choice of unit is available, the needs of the student will determine the unit chosen. It is possible to enlarge, condense or combine units to adjust to the demands of the teaching situation.

Program and Course Description

Junior High School

CLOTHING AND TEXTILES

The following units represent a level of difficulty for each year of junior high school.

Unit One	Basics of Sewing
Unit Two	Intermediate Sewing
Unit Three	More Advanced Work in Clothing

The teachers should aim for a gradual increase in the degree of learning difficulty from the outset, without attempting to teach too much. A limited number of objectives, well thought out and well executed should give the best results.

FAMILY STUDIES

Although family studies is a vital part of every home economics lesson, it is concentrated in one-third of the junior high school program. For the convenience of the school's timetable, the concepts in this course may be dispersed throughout the year; however, it is preferable to have one-third of the school year designated as a block to provide a more thorough program.

Units One, Two and Three should be completed during the first two junior high years. The third year is the best time for Unit Four, a Child Development Program called "Exploring Childhood". If it is possible to bring preschool-age children to the school, the class time should be divided so that the students spend the first part of the term studying about young children and the last few classes actually working with the children. If it is not practical to bring the children to class (because of school busing, timetabling, etc.), other ways should be found for the junior high students to observe preschool-age children in a group setting.

Unit One	Myself As A Person
Unit Two	Changing Relationships
Unit Three	Increasing Understanding of Self
Unit Four	Exploring Childhood

FOODS AND NUTRITION

As students from primary to grade 6 increase their knowledge of nutrition, home economics classes will adapt this knowledge to more practical experiences. Emphasis will now change from dealing with food groups in isolation to combining these food groups into meal preparation. Emphasis should be placed on the purchase of food as well as on the safety precautions needed during the storage and preparation of the food. Within the flexibility of this program the teacher has the opportunity to design objectives that will meet the needs of the students.

The following guidelines suggest five units. Unit One should be completed by all students before the other units are started. Units One and Two could be completed in one year. Unit Five could be divided over the three-year period or kept together as a unit called "Junior Chefs" or "Occupational Foods" for the students who may seek employment in food-related jobs (waiter/waitress, assistant cook, etc.)

Unit One	Basics in the Kitchen
Unit Two	Planning and Preparing Simple Meals
Unit Three	Dinners — The Main Meal
Unit Four	Use of Local Foods and Local Food Customs
Unit Five	Pre-Occupational Work With Foods

Senior High School

It is intended that the following should be elective units. Very few, if any, would require prerequisites. Thus the units could be taught at any high school level, according to the needs of the students and the resources of the school.

Each of these units is one-half or one-third of a year depending on school timetables. It would be possible by joining two or three units in the same area to take a whole year of Foods, Clothing, etc., or it would be possible to do one unit in each of three areas each year.

Note: In some schools, first-year students (especially boys) come into home economics without junior high background. In this case, it may be necessary for the teacher to use a junior high program or a combination of junior and senior high programs. It is important to meet the real needs of the students at their own level of experience.

Note: Students entering the nursing profession must take at least one unit in nutrition in the senior year to have home economics qualify as an entrance elective.

CHILD DEVELOPMENT

Unit One	The Baby
Unit Two	The Young Child
Unit Three	Special Interest in Children

Note: Unit Three would be for students with an interest in nursery school or special homes for children.

CLOTHING AND TEXTILES

Unit One	Family Clothing
Unit Two	Fashion and Flair
Unit Three	Textile Crafts

FAMILY STUDIES

Unit One	Personal Development in the Mid-teen Years
Unit Two	Relationships Between Man and Woman
Unit Three	Adult Living

FOODS

Unit One	Family Meals (1) Meat and Other Protein Foods
Unit Two	Family Meals (2) Carbohydrates and Fats
Unit Three	Foods Supply and Marketing

Note: Some classes studying these topics might adapt a theoretical scientific approach; others may have students that need a more practical view.

HOUSING

Unit One	Housing as a Social Issue
Unit Two	Buying, Building or Renting a Dwelling Place
Unit Three	Interior Design and Furnishing
Unit Four	Management of a Home

Special Education

Many students in special education classes are able to profit from the regular program based on the teaching guide, *Home Economics for Children and Youth With Exceptional Learning and Behaviour Characteristics* (No. 6, 1977).

Industrial Arts

Teaching Guides

Teaching guides are included in an Industrial Art Education Program Handbook, Teaching Guide No. 49, 1980.

General Woodwork — Level 1 — Junior High Grades 7-9
Level 2 — Senior High Grades 10-12
General Metals — Level 1 — Junior High Grades 7-9
Level 2 — Senior High Grades 10-12
Graphic Communications — Level 1 — Junior High Grades 7-9
Level 2 — Senior High Grades 10-12
Electricity/Electronics — Level 1 — Junior High Grades 7-9
Level 2 — Senior High Grades 10-12
Power and Energy — Level 1 — Junior High Grades 7-9
Level 2 — Senior High Grades 10-12

and the following three, individual senior high teaching guides:

Construction Technology (No. 9, 1976)
Communication Technology (No. 12, 1977)
Manufacturing Technology (No. 23, 1977)

Supplementary Documents

Industrial Arts Metric Implementation Guide (No. 6, 1978)
Industrial Arts Resource Book (No. 42, 1983)
Home Technology (No. 43, 1983)
Power Technology (No. 44, 1983)

General Notes

The industrial arts program is designed to help students understand, live and work in our modern industrial society. The essential feature of the industrial arts program is modelling, in contrast to notation in science and language in the humanities. This is a feature which has always been characteristic of industrial arts programs that developed the whole personality — the cognitive and the effective aspects as well as the motor skills. Work with materials should form an important element in a design technology approach which emphasizes the whole process of using materials, from preliminary analysis of need through design research to the production, testing and use of the product. This problem solving sequence provides a structured approach with scope for intuitive and imaginative responses on behalf of the learner which can be employed in different situations. The central aim of industrial arts is to give boys and girls confidence in identifying, examining and finally solving problems with the use of materials. The industrial arts program also aims to help boys and girls gain an understanding of the contemporary industrialized society and especially the dynamic interplay between technology and society.

The aims and goals of the program are:

1. to help students develop competence in communications, computation, critical thinking and problem solving;
2. to develop an insight and understanding of industry and its place in our culture;
3. to develop a degree of skill, and hand-eye co-ordination in the safe and proper use of common hand tools, machines, equipment and processes;
4. to develop an understanding of professional, technical, and trade occupations in the industrialized sector of society;
5. to develop an appreciation of and a respect for craftsmanship, good design and sound construction;
6. to develop recreational and avocational activities of a constructive and creative nature.

Mediate objectives of the program are as follows:

1. To help students develop their whole personalities by recognizing the value of designing and modelling as an important area of human knowledge and its relationship with science and the humanities.
2. To develop in students intellectual problem-solving skills.
3. To help students understand and relate to the rapidly changing technological world.
4. To develop in students an appreciation of good design and a realization of the wise and harmonious use of materials.
5. To develop in students manipulative skills involving a wide range of tools, machines and materials.
6. To have students appreciate the wide range of vocational and avocational activities related to the design technology area of study.

This program is designed to meet the needs of high school students who wish to explore leisure time and avocational interests and pursuits encouraged by this program, as well as those who are planning to pursue advanced study and careers in areas such as applied and technical scienes and industrial vocational education, or who will soon be entering the labor force.

LEVEL I — INTRODUCTORY — (JUNIOR HIGH)

At this level the Handbook does not outline specific courses but rather identifies guidelines, objectives and basic learning for each of the components of the total program, which are as follows:

general woodwork
general metals
power and energy
graphic communications
electricity/electronics

The precise design of the courses and the decision as to the length and number of courses offered are the school's responsibility to be carried out in accordance with local policy and the guidelines outlined in this document.

An introductory industrial arts program should provide as broad an experience as possible for the student during his or her junior high school years. Courses may be arranged as part or whole year experiences, provided that the students have the opportunity of gaining experience in three or more industrial arts components outlined above during the junior high school years.

LEVEL II — EXPLORATORY (SENIOR HIGH)

The organization of the total program at this level follows naturally from that at the introductory level. The handbook identifies guidelines, objectives and basic learning outcomes for the component parts of the program but again the specific development of individual courses based on these guidelines is the responsibility of the school operating in accordance with local policies. The following are the components of the industrial arts program at this level:

graphic communications
power and energy
general woodwork
construction technology
home technology
communications technology
electricity/electronics
general metalwork
manufacturing technology

Again, the main intent of the total exploratory level industrial arts program should be to provide as broad an experience as possible to the student during his or her senior high school years. At this level, however, the courses offered must be credit courses.

SAFETY

Safety is a major concern in any subject which includes "hands on" experiences and activities. Special emphasis is to be given to the third goal of the industrial arts program: to develop in students a degree of skill and hand-eye co-ordination in the safe and proper use of common hand tools, machines, equipment and processes.

It cannot be sufficiently emphasized that safety should represent a primary aim of every industrial arts course.

STUDENT PRACTICAL ACTIVITIES AND PROJECTS

The practical activity or project is the motivator, the means through which the student can plan, solve problems, develop manipulative skills, come to understand craftsmanship and industry and what actually goes into the making of something, the vocabulary used to describe it and the measuring and mathematical skills needed to construct it.

Courses of study in industrial arts should be developed around a nucleus of selected projects and practical activities; however, enough choice should be provided to permit the students to change the design or substitute a parallel project as long as the alternative covers the required topics.

Besides being involved in the production of individual projects, students can work in groups to mass produce projects, in a way similar to that by which products are mass produced in industry. Many of the subject areas of the industrial arts program lend themselves to this approach and besides giving students the experience of working in groups it also provides them with a realistic insight into modern industry. In some instances a small company could be formed to produce products in quantity (see the Manufacturing Technology course).

Polymer, and other artificial materials are used extensively in industry and society in general. In some instances they have completely replaced traditional wood and metal materials and in other cases they are used successfully in combination with wood and metal materials. Since many of these materials can be worked using techniques similar to those developed in the woodwork and metalwork courses, there should be ample opportunity for teachers to introduce materials into the content of the courses in these subject areas. Where the teacher has the experience, and materials and equipment are available, introductory and explanatory work with these materials should be considered as an integral part of the course content, especially in relation to the practical activities and projects produced by the students.

Design problems may be solved totally in plastic materials or may take the form of a component part of a design solution in another material area. The problem must be broken down into manageable parts and tentative ideas must be explored to help clarify thinking as more and more information is gathered and as a methodical mode of working is adopted which allows for personal and intuitive responses to take place.

GENERAL WOODWORKING Level 1 Junior High School
Level 2 Senior High School

This area of study provides students with a series of introductory and exploratory activities in the proper use and care of woodworking hand tools and machines. The content provides a variety of experiences in fabrication, and in assembly and finishing of wood.

Students apply their knowledge and skills by designing and producing a variety of wood projects. On the whole, this course is a reflection of a large and important segment of Canadian industry and is one which offers great potential for design, craftsmanship and experimentation with materials. Provision is also made at Level 2 to offer students exploratory work in woodcrafts and wood construction.

GENERAL METALS Level 1 Junior High School
Level 2 Senior High School

This area of study provides students with a series of introductory and exploratory activities in sheet metal, art metal, forging, casting, metal machining, heat treating, enamelling, etching and finishing. Experience is also gained in assembly methods such as soldering, riveting, use of threaded fasteners, resistance, gas and arc welding. Students are expected to apply and display the knowledge and skill gained by designing and producing a variety of metal projects. These projects should be created with two aims in mind — to give experience and practice in the basic processes, and to present activities which should be worthwhile and interesting to the student.

GRAPHIC COMMUNICATIONS Level 1 Junior High School
Level 2 Senior High School

This area of study provides students with an introduction to graphic communications through a variety of exploratory experiences and activities in blueprint reading, sketching, design and graphic arts. The theory and technology of the course should be applied through related experiences and development of practical projects. The course material of this component should be related continually to the other components of the industrial arts program.

POWER AND ENERGY Level 1 Junior High School
Level 2 Senior High School

It is the purpose of this area of study to provide students with a knowledge of the development and working principles of the common mechanical equipment used to produce power.

Particular emphasis should be given to the mechanical equipment with which the students are familiar or with which they will come into close contact; e.g., bicycles, model and miniature engines, motorcycles, snowmobiles, outboard engines, lawn mowers, power saws, etc. At the senior high school level there is provision to offer students exploratory work in relation to alternate, as well as principal energy sources.

ELECTRICITY/ELECTRONICS Level 1 Junior High School
Level 2 Senior High School

This area of study provides students with learning experiences which will help them understand the industrial and technical applications of electricity. Students are introduced to and have the opportunity to explore the working principles of the electrical devices they will use as consumers, both at home and in future occupations.

The course should use an approach which will include these main phases: (1) instruction and demonstration; (2) student experimentation; and (3) student activities. Besides experimenting with electric components students should construct useful and operating devices, utilizing the basic manipulative skills involved in working with electricity. Selected projects or activities should reflect modern technology and the student's experience of it. There is also opportunity at the senior high level to offer students exploratory work in electronics which will provide a meaningful introduction to the Communications Technology course.

COMMUNICATION TECHNOLOGY

The aim of the course is to improve the students' ability to communicate ideas by familiarizing them with the nature of communication processes and the techniques of converting ideas into symbols, words, picture and sound. This is achieved by study of the graphic/electronic communication industry and related laboratory experiences. This course may be offered in senior high school.

Content: Modern communication; microwave, radar, laser, graphic communication, telegraph; telephone; radio, light writing; photochemical; electrostatic; paper and ink, screen processes, stencils; storage and retrieval; computer, microfilm, microfiche, universal eye, television; sound track; disc recording; magnetic tape

The course involves field and other research and many opportunities for integration with other subject areas.

CONSTRUCTION TECHNOLOGY

The aim of the course is to give students a knowledge and understanding of construction technology through work on both practical construction, including modules or models, and also a variety of written, research and report projects related to construction technology. It may be offered in senior high school.

Content: Safety, man and technology, working drawings; construction industry; foundations; woodframe construction; building, systems; floor, wall and roof coverings; sheathings and insulation; interior and exterior surfaces; landscaping; salvaging and re-using construction materials; construction design principles; home management; consumer knowledge; careers.

MANUFACTURING TECHNOLOGY

This course offers students an opportunity to acquire an understanding of manufacturing as practised in contemporary society. It may be offered in senior high school.

Content: Planning and producing products; safety; industrial manufacturing processes; common types of business ownership; quality workmanship; careers; manufacturing materials and conservation; planning, casting, tooling-up and building prototypes; man and technology; conversion of raw materials into industrial materials.

HOME TECHNOLOGY

This course offers students an opportunity to acquire an understanding of how to establish and organize a home workshop and to develop skills of a pre-vocational and pre-occupational nature which can be applied in a variety of home maintenance and community service situations.

Content: Workshop benches and vises; safe tool care, maintenance and home workshop organization; machine construction; purchasing materials and planning jobs; general interior maintenance and repairs; general exterior maintenance and repairs; plumbing in the home; electricity in the home; climate control and maintenance; home masonry; miscellaneous repairs and maintenance; careers.

POWER TECHNOLOGY

This document provides resource material related to the principal energy and the alternate energy components of the Senior High Power and Energy — Level 2 teaching guide (No. 49, 1980). The document also includes sample unit outlines, modular technology topics and suggested energy experiments and projects. A detailed reference and resource materials section, listing texts, curriculum development projects, catalogues, associations and other materials completes the document.

Languages

French — Second Language

Teaching Guides

French Core Program — Introductory Level (No. 2 1977)
French Core Program — Intermediate Level (No. 21, 1978)
French Core Program — Senior Level (No. 22, 1978)
French — Communications (No. 19, 1977)
Reading, French, Second Language — Introductory to Senior Levels (No. 42, 1979)
ETV Guide, *Qui est là?* for French, Levels 5 and 6

Program and Course Descriptions

Elementary

French should begin at grade 4. It is important that students be encouraged to develop positive attitudes toward both the French language and the people who speak it. The importance of children hearing and imitating good language models cannot be overstated.

Skill development is also important during these first years. The students need to learn to distinguish between the new sounds of the French language and those of English. The use of English, however, must be kept to a strict minimum at all times.

The goal of all language learning is to communicate with others. It is essential that enough time be given to the development of the listening and speaking skills in these first years. Reading and writing skills should be delayed just long enough to allow students to master the vocabulary of the program in conversation.

Careful consideration is to be given to the continuous nature of skill development in selecting program materials. These should help students progress as naturally as possible through the stages of language mastery and the appreciation of the French culture. Wherever possible, a classroom should be assigned as a French room so that the need to move equipment from one classroom to another will be unnecessary. A "French" atmosphere, created in a particular classroom, can facilitate the teacher's work with the students. Much of the success of a French program depends on the ability of the teacher to generate an energetic, enthusiastic response in students.

Daily, short periods of French are more effective than longer, more infrequent periods. The use of songs, games and activities involving small and large groups of students encourages their participation in the oral use of the language. Whatever encourages the students to listen, respond, and eventually initiate conversation is to be emphasized.

Junior High

Co-ordination among all programs offered from elementary through the senior levels must be assured. *It is absolutely essential that elementary and junior high teachers maintain close communications and provide a smooth transition from one level to the other.* The transition from elementary French to junior high French should be well planned. Instruction should begin from where the students are. With the exception of a review, parts of the program previously mastered should not be repeated.

Comprehension, speaking, reading and writing are the basic skills to be stressed, with particular emphasis in the early years placed on comprehension and speaking. As in the elementary levels, reading and writing should be limited initially to vocabulary and structures already practised orally.

Every opportunity should be used to have French spoken by both teachers and students. In no case should translation from English to French or vice versa, be considered as a teaching technique in the school program.

The daily study of French can do much to help students learn the language more quickly. Whenever possible, the provision of a French classroom should be encouraged. It will save valuable time and energy in transporting equipment and makes possible the creation of a "French" environment.

It is to be hoped that, at least in larger schools, several types of approaches will be offered to meet the needs of students. Materials for a more gradual approach with stronger oral/aural emphasis for students may be introduced early in grade 7.

Whatever the program materials selected, the four-skill approach (understanding, speaking, reading and writing) will remain the same, although it is understood that all students will not achieve the same level of mastery.

The frequency lists of *Le Français Fondamental* serve as a base for the scope and sequence of vocabulary and structures used in most recommended program materials. For this reason, a teacher may reasonably follow suggestions made in the teacher's manuals concerning appropriate vocabulary and structural items to be introduced at each level.

Grade 7

When students have had the benefit of French instruction during the grade 4-6 sequence, it is especially important to take full advantage of previously acquired knowledge and skills. For those who have completed the elementary sequence, the reading program takes on greater importance although speaking and listening still occupy 75 per cent of program time. Twenty-five per cent of the time is devoted to reading and writing. For students who are beginning the program in grade 7, the emphasis should be on reading and listening.

FRENCH: COMMUNICATIONS
Students who have encountered difficulties as more emphasis was put on reading and writing may now require an approach which stresses basic skills in practical situations. This program is designed to stress oral communication while using reading and writing as support skills. It is important that oral French be used for classroom activities. *Translation is to be avoided.*

The program must provide for a thorough review of the early structures and vocabulary to permit students to familiarize themselves with the basic concepts of the language. Activity-based learning experiences (games, songs, projects, etc.) should be incorporated into the program. While understanding and speaking are of primary importance, reading at an appropriate level and writing, where oral/aural activities need this support, can be helpful to students. The availability of good reference material is important and teachers are encouraged to help students learn how to make use of it so that they can work in small groups or individually. Activities which improve student interest and motivation are highly desirable.

Grade 8

FRENCH: CORE
This program encourages students to perfect their oral skills and to use reading and writing not only as support skills but also as a means of studying language behavior and structure. While it is important to spend 65 per cent of the available time developing oral/aural skills, it now becomes important to stress reading and writing not only for pleasure but also for information. There must be assurance that comprehension takes place without resort to translation.

Reading materials should correspond closely to vocabulary acquired in the program materials. They should neither be too easy nor too difficult. Students should not have to look up too many words in the dictionary or they will become discouraged.

Writing should follow directions in the teachers' guides and manuals.

Grade 9

FRENCH: CORE
At this level, about 60 per cent of the student's time should be spent in practising and further developing aural/oral skills, while the rest of the time is spent on reading and writing. It should now be possible for students to learn some new material from the written contents of their program. They will also have the opportunity to continue a systematic study of the structure of the language as well as of its use.

Extra reading materials at an appropriate level will be needed to provide a broader range of recognition vocabulary. The appropriate level of difficulty of reading materials selected within the intermediate range can best be judged by the teacher.

Senior High

Throughout the final three years of high school the student's time is equally divided between the development of oral/aural skills and reading and writing. Students are now capable of learning new material from the written content of their program.

FRENCH 421 (FRE 421)
While maintaining the level of 50 per cent oral/aural skills and 50 per cent reading and writing, it should now be possible for students to read at a fairly advanced level. They should have the ability to discuss orally (with some preparation) topics about which they have read. The study of structure should include some less commonly used forms and levels of language usage.

Literary passages and other appropriate reading materials at the senior level, should be selected by the teacher. It would be expected that such materials would include newspapers and magazines as well as texts. The use of French radio and television programs, where these are available, as a base for comprehension and class discussion, is encouraged.

Composition and writing form an integral part of the program.

FRENCH 221 (FRE 221)

The students should now be capable of greater proficiency in both comprehension and oral expression. At the end of this level, they should be able to understand most French spoken by native speakers and should be able to express themselves with some fluency. Their level of reading should now lead them to observe more complex structures while their writing program should be gradually leading them to learn how to express their own ideas.

Care must be taken to avoid the study of structure for its own sake. Reference materials should always be available when a written assignment or test is given. Emphasis is given to what is practical and desirable to support oral communication and for this purpose the use of both reading materials and other stimuli such as radio, television, and audio-visual presentations, is essential. Classroom activities which include discussion, dialogue, oral reports, and games can do much to help the students develop their oral skills.

FRENCH 431 (FRE 431)

This level of study of language and its structure should now permit students to be quite competent to speak and write in authentic patterns. The reading program should include current topics as well as literary selections. Exercises, both written and oral, as well as projects can now become more interesting and even innovative. This would be the normal level of preparation for students who plan to pursue their study of language beyond the high school level.

Some students should be challenged with materials beyond this level. All should be provided with supplementary reading materials at the senior level. It may be possible for much of the actual teaching to take place through the use of these materials and others, while core materials would serve as a reference and for home preparation of more difficult structures. At least 50 per cent of class time should be used for oral activities. This concentration of time should be reflected in the testing program given to students.

FRENCH 231 (FRE 231)

As their vocabulary increases, students should be able to respond spontaneously in conversation on a practical everyday level. They should be able to recognize and use good patterns of spoken and written language. They should be able to read and discuss magazine and newspaper articles. The writing program should help them express some of their own ideas in letters, short descriptions and other simple exercises.

Stress should be placed on the student's ability to communicate desired meaning briefly and plainly in practical situations in which they may possibly find themselves. Listening comprehension is a skill which needs to be developed in classroom situations and does not consist of the memorization of words or phrases.

FRENCH 441 (FRE 441)

In the final year of the core French program, students should be able to respond spontaneously in conversation on a more advanced level. Shades of meaning should not present too great a difficulty and comprehension of French spoken with many different accents should be part of the students' training. Students should be able to distinguish between appropriate and inappropriate language patterns in spoken and written French. They should be able to prepare and present discussions on a variety of topics of interest to them and be able to write compositions of a fairly complex nature.

Reading of newspaper articles, sports events, world affairs, Canadian current affairs, should be part of the regular program. Students should be familiar with the works of some of Canada's as well as France's most noted writers in French. All areas of interest can be the subject of formal debate, class discussions, organized public speaking, written compostion, and letter writing.

FRENCH 241 (FRE 241)

In this final year of the communications program students will continue with experiences in oral/aural language development. Conversation will be extended to more complex topics and writing will reflect a more mature outlook on life by the students.

Reading for information and enjoyment will continue at a more advanced level. Articles from magazines and newspapers dealing with subjects of interest to the particular age group of the students should form part of the program. Each classroom and/or school library should possess a variety of materials for supplementary reading.

SPECIAL NOTE CONCERNING FRENCH 231, 241, 431, 441

Credit for any of the above may be granted to students at the discretion of their school as a result of the students' satisfactory completion of a six-week Summer Immersion Program funded by the Secretary of State and administered by the Department of Education.

It should be noted further that only three credits in French may be counted as part of the 16 required by the Department for high school completion.

Gaelic

Teaching Guide

A senior high Gaelic teaching guide is available from the Modern Languages Consultant, Curriculum Development Program, Department of Education, P.O. Box 578, Halifax B3J 2S9.

PROGRAM AND COURSE DESCRIPTIONS

Primary to Grade 6

The aim is to encourage interest in and arouse curiosity about the Gaelic heritage. Initially, students are taught conversational phrases which are most frequently used so that they may experience a sense of satisfaction and achievement. The use of songs, games and stories will be very helpful at this stage. The songs and stories should be drawn from local tradition, if possible. This allows the students to receive approval in their own environment.

Opportunity should be provided for students to become familiar with historical events of particular significance to Canadians with a Scottish background. The lives of famous Canadians who share this common bond should be studied.

Shorter daily periods of instruction in a second language are more effective than longer, more infrequent periods. It would be advantageous to have a particular classroom assigned to the teacher of Gaelic. The teacher may then create a better learning environment where language, social studies and cultural projects can be integrated as part of the Gaelic program.

With an early introduction to the oral/aural skills and an interest in the cultural background of the Scottish tradition, the students should find the motivation needed to maintain their interest. The level or levels at which Gaelic is to be included is a matter for local decision, with Curriculum Development staff advice, if desired.

Grades 7-9

While continuing to develop the aural/oral skills and providing the opportunity to deepen the students' understanding of Scottish culture, it will now be time to introduce the skills of reading and writing in Gaelic. A minimum of 25 per cent of class time should be provided for this in the early stages. This should permit the students to profit from the advantages of their previously acquired skills, both for their further development and as a base for reading and writing. It is, however, important that speaking and aural comprehension not be neglected. It should be possible for the student, at the end of this stage, to use a four-skill approach to prepare simple compositions for both oral and written presentations.

Grades 10-12

GAELIC 421 (GAE 421) Prerequisite: None
For those students who have not had previous instruction in Gaelic at the elementary and junior high school levels, the programs for these levels should be followed at an accelerated pace. For other students, the reading and writing skills would further support the already acquired aural/oral skills.

GAELIC 431 (GAE 431) Prerequisite: Gaelic 421
By this stage, students should have acquired a reasonable degree of fluency in the oral use of the language. They should be allowed ample opportunity to continue to strengthen this skill. A study of grammatical structure is joined to the practical use of the four skills to enable students to begin to understand basic relationships in language usage.

GAELIC 441 (GAE 441) Prerequisite: Gaelic 431
The four-skill approach with cultural elements continues to serve as a base for this level. Further studies in the structure of the language and readings at an appropriate level, selected by the teacher, will be part of the program.

German

Teaching Guides

German: Grades 10, 11, 12, revised edition

Program and Course Descriptions

Grades 10-12

The program offered to senior high school students is designed to lead to proficiency in the four language skills (understanding, speaking, reading and writing). It also offers to students the opportunity to learn the fundamentals of German grammar, and to acquire some familiarity with German literature and other cultural and historical achievements. Because of the age, interests and academic background of the students who select German as a course option, it is usually possible for the program to progress at a fairly rapid pace. This allows teachers to offer core program materials during the first two years, followed by a selection of paperbacks on literary and cultural topics during the final year.

GERMAN 421 (GER 421)
Introductory German offers basic vocabulary and structures with some expansion to permit more interesting content. Core materials are presented in simple dialogues which gradually familiarize students with more complex material. Reading and writing are also introduced at this level through the use of exercises and essays designed for this purpose.

The direct method is used to present vocabulary and structure in familiar situations from the beginning. Program materials provide a range of high frequency vocabulary and expressions in the content of dialogues. After these have been practised, observations are made about structures which have been used and students are encouraged to learn how the elements of the language relate to each other.

GERMAN 431 (GER 431)
While the basic skills continue to be developed through appropriate use of program materials, the student is now encouraged to practise analysing grammatical structure. The reading program, which encourages "intelligent guessing" and penalizes "looking up", is designed to develop good reading habits by helping students grasp meaning from phrases and sentences rather than word by word. The use of language is always stressed over the ability to quote rules or to translate. Both accuracy and fluency are encouraged in the oral use of the language, with the emphasis being on accuracy in these early stages.

GERMAN 441 (GER 441)
Core program materials continue to be available to assist in the development of the four basic skills; however, much of the students' development at this stage will focus on language usage. A selection of printed materials designed to stimulate conversation and writing is now made available to students. The teacher's judicious use of such materials plus well-chosen projects can result in stimulating learning experiences. While students continue to analyse grammatical structure, to read, write and speak German, they should now be able to use their skills both for pleasure and information. This level is designed to prepare for university entrance programs as well as to provide a satisfying experience in language learning.

Latin

Teaching Guide

Latin Grades 9-12 (No. 40, 1979)

Program and Course Descriptions

Grades 9-12

Latin is offered to students in grades 9 to 12. The program is designed to help students learn to read Latin. At first, the emphasis is placed on becoming familiar with the language and later, with the literature and culture of the Romans. The study of grammatical structure aims to increase the students' ability to read at a more advanced level. As they become capable of understanding reading selections, they will also be learning to translate Latin passages into good idiomatic English. Throughout the program, both oral reading of Latin and oral translation of English into Latin is encouraged. As the students progress, they will need less stress on grammatical construction and more on reading so that, as their proficiency develops, they may have the opportunity to read Latin authors.

LATIN, Grade 9

Introductory Latin stresses the development of acquisition of vocabulary. The pronouncing of the new words and phrases and their comprehension helps students to enjoy the study of Latin. With respect to verbs, the first to the fourth conjugations are introduced in the present and imperfect indicative active tenses as well as in the imperative active. The agreement of adjectives in the first and second declensions is treated. Nouns of the first, second and third declensions are studied in the six cases. If time permits, it may be possible to introduce the study of third declension neuter nouns.

Latin 421 (LAT 421)

This is a continution of the Latin program offered at the grade 9 level. It is recommended that students continue their study of vocabulary and grammatical constructions while practising reading, both for free comprehension and for more accurate translation. At this level, the passive voice will be introduced. It is recommended that students progress to a study of the present, imperfect and future indicative passive tenses in fourth conjugation verbs.

LATIN 431 (LAT 431)

As the student's vocabulary and knowledge of grammar increases, he/she is able to read with greater ease. Accordingly, extra reading material is now made available for use at this level for both comprehension and translation. Testing will probably occur at less frequent intervals and will be more comprehensive. It should be possible to progress to the study of deponent and semi-deponent verbs.

LATIN 441 (LAT 441)

In grade 12, there is a decreasing emphasis on grammar with a proportionately increased stress on reading. It is possible too, that students may have occasion to participate in projects involving research on topics already discussed in their reading program. Students can also now become more skilled in sight reading and translation. Regular review of materials learned earlier will be very important. It will also be essential that students have a good understanding of the ablative absolute and indirect statement constructions because of their extensive use in the grade 12 work. The progress tests in each unit of work can do much to assist in determining pace and where areas of the program need greater attention or emphasis. Completion of this level is normally required for university entrance.

Spanish

Teaching Guide

Espanol: Guidelines for the Teacher (No. 4, 1976)

Program and Course Descriptions

Grades 10-12

The Spanish course offered at the senior high school level is a three-year course. Though it will deal with the fundamentals of Spanish grammar and syntax, the main emphasis will be on learning to understand and to speak Spanish. Students will spend much time practising the basic patterns of Spanish speech. Students will also gain some insight into the cultural achievements of Spain and Latin America: they will have opportunities to listen to and sing Spanish songs, read simple Spanish stories and poems, listen to Spanish radio programs, and watch Spanish films. Students will also be encouraged to correspond with pen-pals in Spain and/or Latin America.

SPANISH 421 (SPA 421)
Students learn to understand and to speak Spanish with a minimum of grammar. They will spend much time practising basic language patterns.

The greatest emphasis should be placed on the skills of comprehension and pronunciation so that students can learn to hear speech patterns which they will be encouraged to imitate as accurately as possible. After correction of errors and subsequent practice of pronunciation drills, students progress to the directed "dialogues". These should provide practice for groups of two students in the most frequently used expressions of the language. Games, songs and other classroom activities will help keep the program interesting and avoid overemphasis on the written word before students acquire sufficient oral/aural skill.

SPANISH 431 (SPA 431)
This is a continuation of Spanish 421. Students will become familiar with more complex patterns of speech. Simple stories will be introduced. By the end of the year, some students should be able to participate in basic conversations with native speakers of Spanish.

The use of simple to complex substitution drills in basic language patterns will help students acquire the ability to manipulate structure and vocabulary at this level. All presentations should begin with the oral introduction of new material. As students become familiar with the "dialogues", they are taught to read the material and adapt it to their own situation. Appropriate levels of vocabulary and structure to be presented may be selected from the recommended program materials and the *Guidelines*.

SPANISH 441 (SPA 441)
A continuation of Spanish 431. More challenging reading selections will be introduced. Radio programs taped from South American short wave stations will be used to get students accustomed to follow by ear Spanish spoken at normal speeds. Students will do some original composition work.

Since students should now have acquired a reasonable level of oral/aural skills as described in the two earlier levels of Spanish, more use may now be made of the written form of the language. Composition is now a frequent activity and will progress from a series of simple statements made in response to question clues, to more original work. For some students, this can be quite productive; others will not be capable of performing such demanding or complex exercises. The more complex structures and vocabulary recommended in program materials for level 441 will need widely varying methods of presentation. Suggestions in the Teacher's Key and in the *Guidelines* may assist the teachers in these presentations.

Mathematics

Teaching Guides

Mathematics P-6 (No. 17, 1977)
Mathematics Seven and Eight (No. 13, 1978)
Mathematics with Consumer Applications (No. 7, 1977)
Mathematics Nine and Ten (No. 81, 1983)
Adjusted Program — Mathematics (No. 53, 1980)
Topical Outline — Algebra and Co-ordinate Geometry (9-12) (1974)
Geometry — Topical Outline 421, 431 (1974)
Mathematics 221, 231, 241 (No. 18, 1977)
Mathematics 541 (No. 12, 1978)
Statistics 442 (No. 25, 1978)

Supplementary Document

Checkpoint Strategies (No. 25, 1980)

Program and Course Descriptions

Primary — Grade 6

PROGRAM: GENERAL OVERVIEW

The elementary mathematics program is divided into three strands:

1. number operations and relationships;
2. measurement;
3. space and shape relationships.

These topics should be inter-related and are explored in a spiral manner to provide many varied opportunities for children to discover the order, pattern and relations which are the basis of mathematics and to acquire the necessary mathematical skills.

Children in early elementary school are to be given ample opportunity to develop their abilities to compare and to classify and sort before working with the concept of number. These preliminary abilities and concepts are essential to the future mathematics development of children.

With the change to the metric system, the elementary mathematics program emphasizes working with decimals. All children need to acquire an efficient method for each of the four operations with whole numbers and with decimals. These methods are to be well grounded in experiences with concrete materials using first real objects and then structural materials such as unifix cubes or base blocks.

The work done with fractions concentrates on halves, fourths, fifths, tenths, and hundredths, with most of the computational work with fractions done only at grade 6.

The following are some of the specific concepts and skills to be acquired by each pupil to the fullest extent of mastery that can be expected of the pupil concerned.

Primary Grade to Grade 3

Numbers — Operations and Relations. Read and record relationships between numbers using concrete material; correctly use words for "greater than", "less than" and "equals" to show relationships; skip count by 2's, 3's, 4's, 5's and 10's; recognize and continue number patterns; know addition and related subtraction facts through 18; know multiplication and related division facts through 5 × 5; identify 1/2, 1/3, 1/4, 1/5, 1/10 of a region; use decimals 0.1 to 0.9 and 0.01 to 0.99 in real world situations; add and subtract two- and three-digit numerals; multiply two- and three-digit numerals by a one-digit numeral; identify mathematical problem situations in the real world and begin to develop methods to solve these problems.

Geometry — Shape and Space Relationships. Classify and sort objects according to various attributes; recognize, describe and extend patterns; recognize geometric shape in real world situations; construct three-dimensional and two-dimensional models; identify and name various three-dimensional and two-dimensional shapes in different positions and sizes; identify symmetrical shapes; identify lines of symmetry; create symmetrical designs; identify plane figures which are congruent; demonstrate some of the properties of geometric shapes.

Measurement and Relationships. Compare and order objects as to length, height, volume, mass; estimate and measure using non-standard units; estimate and measure using centimetre, metre, grams and kilograms, litres, degrees Celsius; use standard metric measuring instruments; tell and write the time; understand weeks and months; correctly use money for purchasing and making change; collect data; construct and interpret pictographs and bar graphs.

Grades 4 to 6

Operations and Relationships. Correctly use symbols for "greater than", "less than" and "equals" to form sentences; find the solution to simple equations and inequations using whole numbers; solve word problems; demonstrate knowledge of the commutative, associative, and distributive properties and the properties of zero and one, by using them to shorten computational problems; use patterns of multiplying and dividing by 10, 100, and 1,000 to estimate answers; correctly use the multiplication algorithm and division algorithm; maintain mastery of basic addition and subtraction facts and multiplication and division facts; find the factors and multiples of a number; find the G.C.F. and L.C.M. of a pair of numbers; read and identify decimals to thousandths; add, subtract, multiply and divide decimals; estimate products and quotients of decimals; use decimals in problem-solving situations; use ratio in applied mathematical situations; find a given per cent of a number; demonstrate an understanding of fractions through the use of concrete materials; solve simple addition, subtraction, multiplication and division problems using fractions (mostly halves, fourths, fifths, tenths, and hundredths); use integers in physical situations; order integers on the number line; add integers; identify mathematical problem situations in the real world and develop strategies to solve these problems.

Geometry — Shape and Size Relationships. Classify, sort and identify two-dimensional and three-dimensional geometric shapes; construct geometric models; identify vertices, faces, edges; identify parts of a circle; identify lines of symmetry, perpendicular and parallel lines, types of angles; use various geometric instruments to construct geometric figures; draw reflections and demonstrate simple turns and flips with various geometric shapes; develop pattern designs such as tesselations; demonstrate properties of shapes and their interrelationships.

Measurement and Relationships. Estimate and measure using metre, centimetre, millimetre, kilometre, kilogram, gram, litre, millilitre, degrees Celsius; correctly use prefixes of SI metric system; find perimeter, area and volume of various geometric figures; locate points in the co-ordinate plane; read and interpret tables, charts and graphs; collect data; construct and interpret picto, block, bar and line segment graphs.

At all levels, a variety of teaching methods and working conditions are used:

- extensive experience with real materials whenever a new concept is introduced
- care so that each individual has opportunity to proceed at his/her own rate through the stages of
  - experimentation with material
  - formation and testing of hypotheses about the relationships she/he perceives
  - communication of his/her findings, first by word of mouth or by diagram, then in writing or symbols
  - practice to fix a concept once it has been understood, always following, never preceding discovery

It is essential in this program, as in other disciplines, that each student enjoy and succeed in his or her work. The student's attitude to learning is of prime importance. The seeds of a positive attitude are sown in countless real situations, activities, discussions and applications to new situations in which the students increase their confidence in their ability to cope with the world.

Grades 7-9

In order to meet the varying needs and abilities of pupils in the junior high school, the mathematical experiences available should be large in scope and varied in purpose. They should evolve from the students' earlier learning experiences; hence those planning the program must have a clear understanding of the current developments in the elementary school mathematics program. To maintain student interest and responsibility in the learning situation, teachers should broaden their classroom techniques to include such methods as small group investigations, mathematics laboratory experiences, games and puzzles, visual aids, concrete models, applications to the environment, problems related to real situations, projects, and individualization of some aspects of the program.

Teachers should be aware of the spiral nature of the mathematics curriculum in which ideas are introduced early and extended by periodically returning to consider them at greater depth.

The emphasis of the mathematics program should be on the development of both concepts and skills. The question of the amount of work necessary on each will vary with the class and individual student.

GRADE 7
Review of operations and properties of whole numbers and decimals, mental arithmetic skills, with emphasis on estimating answers and rounding, extension of work with fractions to begin to develop competency; factors, prime and composite numbers, LCM, GCF, problem solving, including applications to real situations, estimation, metric measurement applications, ratio, proportion, per cent, consumer problems, similarity, graphing, statistics, simple probability, relations, functions, co-ordinate graphing, equations, inequations, integers, various types of polygons and some of their properties, symmetry, slides, flips, turns, simple geometric constructions, reading and intepreting tables, charts, maps and graphs, strategies for problem solving.

GRADE 8
Extension of the previous work with whole numbers, decimals, fractions, integers to include rational numbers stressing applications, problem solving, estimating, solutions to equations and inequations, relations, functions, coordinate graphing, square roots, irrational numbers, exponents, scientific notation, application of metric measurement, including perimeter, area, volume, estimating, rounding, precision of measurement, Pythagorean Theorem, ratio, proportion, per cent, scale drawing, consumer problems, statistics, collecting data, constructing graphs, reading and interpreting tables, charts, maps and graphs, probability, congruence transformations and their

properties; geometric properties of plane figures, simple constructions, similarity, problem solving using similar triangles, strategies for problem solving.

GRADE 9 — ACADEMIC
Extension of previous work with integers, rational and irrational numbers, exponents, decimal approximations of square roots, applications including Pythagorean Theorem, exponents, review of SI measurement, including perimeter, area, volume, and surface area, and precision, estimation, relations, solving linear equations and inequations, graphing relations, evaluating expressions, adding and subtracting polynomials, multiplying and dividing by monomials, product of two binomials, common factoring, factoring $1x^2 + bx + c$, ratio, proportion, per cent, rate applications from business and commerce, size transformations, scale drawing, transformations and their properties, algebraic descriptions of translations and reflections, properties of geometric figures including types of angles, triangles, quadrilaterals and other polygons, parallel and perpendicular lines, angle bisectors, perpendicular bisectors, altitudes, angles in circles, lines of symmetry, turn symmetry, constructions, congruence, review and extension of ideas of 3-D figures, statistics including organizing and displaying data, interpreting tables and graphs, abuses of statistics, simple data gathering techniques including random sampling and non-rigorous predictions based on sampling.

or

GRADE 9 — MATHEMATICS — WITH CONSUMER APPLICATIONS
This course is intended for students who need more time to cover the basic skills of mathematics and more emphasis on applying them to consumer-related problems. The needs and abilities of these students are varied and they should be given every opportunity to develop the mathematical understanding and skills that will benefit them. These students require patient assistance and an opportunity to experience success in mathematics.

The topics to be covered are reading and interpreting tables, charts and graphs, using whole numbers, decimals, fractions in applied situations, metric measurement, plane and solid geometric figures and some of their properties, ratio, proportion, per cent, rounding, estimating, scale drawings, graphing, banking services, buying and selling goods and services, consumer tips, personal finances, and simple algebra.

ADJUSTED PROGRAM GRADES 7-9
The major aim of the adjusted mathematics program is to develop the students' ability to use mathematics in situations that occur in daily life.

This three-year program includes the topics of number patterns and skills, estimation, ratio, proportion, scaling, measurement, statistics, applied geometry, and consumer mathematics.

GENERAL NOTE
Teachers should be aware of the spiral nature of the mathematics curriculum in which ideas are introduced early and extended by periodically returning to consider them at greater depth.

Intuition and application to concrete situations should be carried forward into high school mathematics. Integration with other subject areas, relating mathematics to the environment and emphasizing problems related to real situations are to be encouraged.

Algebra and geometry in grades 10 and 11 should not be considered as separate half-credit courses, but there should be a 421 mathematics course and a 431 mathematics course which include and integrate the topics listed.

MATHEMATICS 421 (MAT 421)
Relations, functions, linear equations including slope and intercept, systems of linear equations, inequations, applications, review of SI measurement, ratio, proportion, consumer applications, Pythagorean Theorem, irrational numbers, radical expressions, right angle trigonometry and applications, direct and inverse variations, co-ordinate geometry including distance, midpoint, slope of parallel and perpendicular lines, investigation of properties of triangles, quadrilaterals and circles, vectors and applications, statistics including gathering, organizing and using data, random sampling, making inferences about a population, abuses of statistics, review of congruence transformations and their properties, deductive reasoning leading to formal proofs, composition of transformations, algebraic descriptions of transformations, introduction to dilatations, applications, operations with polynomials, factoring, quadratic equations.

MATHEMATICS 221 (MAT 221)
Measurement, perimeter, area, ratio, proportion, banking services, credit, rational numbers, exponents, simple radicals, square root, Pythagorean Theorem number patterns, per cent, simple equations, inequations, formulas used in business and industry, consumer mathematics including pay cheques, taxes, budgeting, government services, purchasing goods and services, reading and interpreting tables, charts, and graphs, collecting, organizing and analysing data, geometric constructions, measurement of solids, review of the SI metric system, indirect measurement, relations, linear equations, co-ordinant graphing, graphing linear equations, applications of linear equations. Applications in this course may focus on either problems from business or from trade and industry.

MATHEMATICS 431 (MAT 431)
Note: This course is to be replaced by the two courses below by 1985-86.

Relations, functions, inverse of a function, linear, quadratic, exponential, logarithmic and circular functions, analytic geometry, including midpoint distance, equation for lines, circles, and tangents, graphing, systems of linear and quadratic equations, inequalities, applications, complex numbers, sequences, series; trigonometric functions, graphs, identities; area, similarity, special similarity of right triangles, circle geometry.

MATHEMATICS 431 (MAT 431)

Note: This course may be offered in 1984-85. It is intended for students who will have to take at least a full-year calculus course in their program at post-secondary institutions.

It is intended that proofs be done throughout the year. Every opportunity should be taken to incorporate problem-solving techniques and proofs in every topic.

Functions, including constant, linear, quadratic, exponential, logarithmic and trigonometric functions; for each of these functions studies should include graphing, translations, reflections, strengths and their effects on the equations and graphs, inverse function, evaluations for various substitutions, zero(s) and assigned f(x) values, inequations, applications and calculator use; law of sines and cosines, identities, trigonometric equations; analytic geometry including translations and dilatations of circles and ellipses, intersections of lines and conics, inequations; matrices and operations, relations of matrices and transformations, matrices and linear systems; statistics and probability including hypothesis testing through simulations, introductory theory of probability, permutations, combinations and binomial theorem; problem solving in geometry.

MATHEMATICS 432 (MAT 432)

Note: This course may be introduced in 1984-85.

Problem-solving skills and strategies; polynomials, radicals, real numbers; linear equations, systems of linear equations and applications, inequations and systems of inequations, linear programming; ratio, proportion, variation including direct, inverse, joint; quadratic equations and applications; analytic geometry including properties of figures, circles and parabolas and translations; statistics including using data for decision making, testing hypothesis through experiments and simulations, probability and expectation; right angle trigonometry, laws of sines and cosines and applications, graphs of sine and cosine; three-dimensional geometry; mathematics for daily use including banking and income tax; matrices, operations, applications including inventory and production costs, transformations related to matrices.

MATHEMATICS 231 (MAT 231)

Statistics, reading and interpreting tables, charts, maps and graphs, abuses of statistics; rational numbers; consumer mathematics; exponents; solving linear equations and inequations using formulas; ratio, proportion, variation; credit, banking services, savings, investments, taxes; measurement, accuracy and precision, linear measurement, area, volume, mass, surface area, scale drawings; similar figures; right triangle trigonometry and applications; geometry construction; relations, problems of operating a business; co-ordinate graphing of relations; solution of simultaneous equations and inequations, applications; products and factors; introduction to quadratics.

MATHEMATICS 441 (MAT 441)

Note: This course is to be replaced by the two courses below by 1986-87

Groups, matrices, vectors, relations and functions, systems of equations, inequalities, conics, trigonometry, complex numbers, polar co-ordinates, De Moivre's Theorem, theory of equations, permutations, combinations, mathematical induction, binomial theorem, introduction to calculus

MATHEMATICS 441 (MAT 441)

Note: This course may be offered in 1985-86

It is intended that proofs will be done throughout the year. Every opportunity should be taken to incorporate problem-solving techniques and proofs throughout every topic

Review of constant, linear and quadratic functions, polynomial functions, theory of equations, factor theorem, rational root theorem, rational functions, curve sketching, operations with rational expressions, algebraic functions, review of exponential and logarithmic functions, extension to include e^x and $\ln x$, conics including rotations and their matrices, translations of ellipses, rotation of hyperbolas, review of trigonometric functions, graphs, extension to include other identities and equations, complex numbers, vectors, De Moivre's theorem, polar co-ordinates, vectors in 3 space, sequences and series and applications, introduction to calculus including limits, tangents, slopes of curves, velocity and acceleration, differentiation of simple functions and anti-differentiation of simple functions

MATHEMATICS 442 (MAT 442)

Note: This course may be introduced in 1985-86

Problem solving skills and strategies, statistics and probability including experimental and theoretical probability, testing of hypothesis through experiments and simulations, expectation, chi-squared, relations and functions, quadratic and linear functions including transformations and their effects on the graphs and equations, review of operations with polynomials, equations involving rational expressions, applications including maximum and minimum problems, quadratic regions, linear and quadratic systems, exponential functions, graphs and applications, logarithmic functions, graphs, working with calculators, applications, analytic geometry including intersections of circles, lines and quadratics, extension to co-ordinates in 3 space, distance and equations and planes in 3 space, matrices including row operations and using the augmented matrix to solve systems of linear equations, applications, sequence and series including applications to compound interest, annuities, mortgages, introduction to limits using calculators and/or computers

MATHEMATICS 241 (MAT 241)

Statistics, probability, financial management, investments, credit, linear equations using slope intercept and applications, ratio, proportion, variation, applications of second degree equations*, measurement in industry, accuracy and precision, scale drawings, income tax, graphing and solving inequations, linear programming, consumer problems including house and car ownership, life insurance, budgets, record keeping, problems in industry, estimating formulas, applied geometry, applied trigonometry*, problem solving, co-ordinate geometry*, algebraic expressions*, vectors*

MATHEMATICS STATISTICS 441 (STA 441)

The aim of the course is for students to be able to read, understand and be critical of the statistical information found everywhere around them. The students will be required to apply statistics to real problems and situations. The topics to be covered are the uses and misuses of statistics, sampling, measures of central tendency and dispersion, probability and expectation, normal curve, binomial distribution, inferential statistics, hypothesis testing, chi-squared test, linear regression and correlation.

This course is not intended as a replacement for 441 Mathematics. It may be taken at the same time as 441 Mathematics or 431 Mathematics.

MATHEMATICS 541 (MAT 541)

This course is for students with special interest and ability in mathematics. The topics include an in-depth study of pre-calculus mathematics and one-third of the year's work in introductory calculus.

**These topics should relate particularly to the interests and capabilities of the class and to their career requirements.*

Music

Teaching Guides

Music P-4 (1981)
Music 5-9 (No 46. 1980)
Music in the Elementary School — page references to *Music. Exploring Music. New Dimensions in Music* (No 8. 1978)
Music in High School — Part I Theory. Ear Training. History. Vocal (No 6. 1976)
Music in High School — Part II Instrumental (No 16. 1978)
A Supplementary Program for Children With Special Needs (Levels P-6) (No 5. 1977)

Program and Course Descriptions

GENERAL NOTE PRIMARY THROUGH GRADE 12 LEVELS
The music education program is designed to provide a balanced, broad musical experience from primary through grade 12. The chief aims are the development of an aesthetic response, good musical taste and discrimination, together with an understanding of as many as possible of those diverse elements embodied in the term "music". At all grade levels, music activities should form an integral part of as many aspects of the total education program as possible.

The Elementary Music Program (P-4)

Music involves many of the senses simultaneously, through continuous and active participation. All music classes in the early grades should contain some type of performance, no matter how simple. Active participation develops skills — physical, mental, verbal. Acquiring such skills develops self-confidence in performance, with the resulting feeling of self-esteem.

This program will be particularly effective where there is collaboration between the music teacher and other teaching personnel.

For advice and assistance concerning any phase of the elementary music education program, classroom teachers, music teachers and principals should consult the head of their school system regarding available resource persons, or the Music Consultant, Department of Education.

Grades 5-9

The music program in these levels is outlined in the guide *Music 5-9*. Implied is the carefully gauged exposure to the more disciplined type of performance, listening, composition and, through projects, other facets of the expressive arts.

All activities at these levels must have as their central goal the improvement of musical perception, and the development of musical sensitivity. To this end, the program is "two-pronged" — offering both performance and general music at all levels from grade 5. The general music provides an extensive exposure to a broad range of musical experiences, the performance experiences are designed to provide an intensive and intimate contact with many of the same types of music. Performance alone is not sufficient. It is only when the mastery of musical skills and the development of musical understanding are both pursued — the one supporting the other — and when musical exposure through the careful selection of materials and presentation of experiences is the major goal, that true musical education will be attained.

The Senior High Music Program

In some schools, where students have had the benefit of a fairly broad music program in earlier grades, the music classes will be quite comprehensive and demanding. Therefore, although not absolutely essential, it is advisable for students at this level to have had a certain amount of practical (performing) experience and to possess a working knowledge of at least the rudiments of music.

To obtain a full academic credit in any one year, a student must take General Music courses, and performance. The general music courses will include at least rudiments, harmony, ear-training, and history. A guide — *Music in High School, Part I* — outlining the requirements for each of these elements is available from the Department of Education. The performance aspect may include work in either the instrumental or vocal disciplines. Guidelines for each of these disciplines are available from the Music Consultant, Department of Education.

Academic credit may also be obtained through private study. The student must offer proof of work successfully completed in both performance and general courses. The performance may be in voice or on any instrument examined by a recognized music institution. The general courses will include rudiments and harmony, history and ear-training. The examinations must be offered by recognized music institutions, and the student shall present certificates of successful completion of the exams to the administration of the high school concerned. Regulations regarding the acquisition of high school music credits through private study are available from the Music Consultant, Department of Education.

Although all parts of the program may be made available separately to students, it should be noted that certain skills — especially performance and perceptual skills — are cumulative, and admission to music class must therefore be at the discretion of the music teacher and/or the school administration.

Physical and Health Education

Teaching Guides

Physical Education, Part I — Aims and Objectives (P-12)
(No. 5, 1970)
Physical Education, Part II — Series of activity guides
Physical Education in the Elementary Schools, Book I, Levels P-3
(No. 4, 1975)
Physical Education in the Elementary Schools, Book II, Levels 4-6
(No. 8, 1976)
Health Education — Growth and Development Levels P-6
(No. 3, 1977)
Physical Education in the Junior High School, Levels 7-9
(No. 14, 1977)
Health Education — Growth and Development, Levels 7-9
(No. 19, 1978)
Physical Education in the Senior High School (1984)

Supplementary Documents

Fitness Development in the Public Schools
Intramural Programming in the Public Schools
Orienteering
Canoeing
Touch Football
Outdoor Education — A Resource Book — No. 23, 1980
ETV Guide, Bixby and Me I, Movement Education Levels P-1
ETV Guide, Bixby and Me II, Movement Education Levels 2-3
ETV Guide, Turtle Soup, Levels P-2
ETV Guide, Inside Out, Levels 3-4

Program and Course Description

The primary aim of the physical and health education programs from primary through the senior high schools in Nova Scotia is:

> To help students develop and participate in a purposeful, physically active lifestyle, which will enable them to experience a more enjoyable quality of life — today and tomorrow.

If students are to be involved in physical activity on a lifelong basis, they must be equipped with the skills, knowledge and activities that will enable them both to enjoy and to benefit from such activities. If students are to acquire the necessary knowledge and skills, teachers need to establish a positive learning environment within the classroom and the school.

Physical and Health Education is designed to develop

1. physical skills which will enable participation in a wide variety of activities;
2. physical fitness for an active life in the student's environment,
3. knowledge and understanding of physical and social skills, physical fitness and the relationship of exercise to personal well being,
4. social skills which promote acceptable standards of behavior and positive relationships with others,
5. attitudes and appreciation that will encourage participation in and an enjoyment of physical activity, fitness, high quality performance, a positive self-image and respect for others

Primary — Grade 6

The physical and health education program is designed to help students

1. develop an appropriate level of physical development in the specific fitness components of cardiovascular endurance, muscular endurance, strength and flexibility,
2. engage in physical activities that will develop *locomotor* skills such as walking, running, jumping and skipping, *non locomotor* skills such as pulling, pushing, bending, stretching and twisting, *manipulative skills* such as throwing, catching, kicking and striking, *motor abilities* such as balance, agility and hand-eye co-ordination,
3. understand basic health concepts, attitudes and skills that promote and maintain well-being,
4. increase self-concept and personal development;
5. recognize the importance of human relations

Grades 7-9

The physical and health education program is designed to help students

1. engage in activities that develop endurance, strength, flexibility, agility and speed,
2. develop motor skills for developmental and recreational purposes,
3. develop a positive attitude towards participation in physical activity,
4. derive enjoyment through physical activities,
5. realize that personal health attitudes and practices affect one's well being and are affected by personal beliefs, values, goals, as well as family and social pressure,
6. realize that certain factors affect their feelings and behavior and relationships with others,
7. understand the fundamentals of wise food choices,
8. become more aware that the environment contains the potential for hazards and accidents and there are practices that are necessary to reduce this potential,
9. gain an understanding of the use, misuse and abuse of dependency-causing substances,
10. develop an understanding of their own sexuality and that of others.

PHYSICAL AND HEALTH EDUCATION 321 (PHE 321)
This physical and health education credit course is designed to

1. develop proficiency in dual, team and lifelong recreational activities,
2. develop an appropriately high level of physical development in cardiovascular endurance, muscular endurance, strength and flexibility,
3. develop a positive attitude toward the value of physical activity for health and fitness,
4. develop an awareness that personal health practices are affected by a complexity of forces.

PHYSICAL AND HEALTH EDUCATION 331 (PHE 331)
This physical and health education credit course is designed to

1. develop a positive attitude toward the development and lifetime maintenance of an appropriately high level of physical fitness,
2. develop an understanding of new techniques and strategies involved in various activities,
3. develop an appropriate level of physical development in the anthropometric components of weight and body composition,
4. develop an awareness of the inter-relationships and complexities of physical, mental and social health.

PHYSICAL AND HEALTH EDUCATION 341 (PHE 341)
This physical and health education credit course is designed to

1. develop a positive attitude toward physical activity as a social experience such as appreciating the role of leadership through experience,
2. develop an understanding of concepts and methods used to acquire physical fitness in aerobic and anerobic activities,
3. develop an understanding in assessing and interpreting personal physical fitness using appropriate techniques and instruments,
4. develop an awareness that interrelationships among individuals, communities and environment all have an effect on human survival.

Science

Teaching Guides

Science in the Elementary School (No. 35, 1978)
Science in the Junior High Schools (No. 3, 1977)
Adjusted Program (Academic) Science, Mathematics (No. 53, 1980)
Biology 221 (No. 33, 1978)
Biology 421, 521, 441, 541 (No. 32, 1978)
Chemistry 431, 441, 531, 541 (No. 15, 1977)
Geology 241 (No. 9, 1977)
Geology 441 (No. 38, 1978)
Oceanography 331 (No. 84, 1983)
Physical Science 231 (No. 41, 1979)
Physical Science 421 (No. 34, 1978)
Physics 431, 441, 531, 541 (No. 13, 1977) (In revision)

Supplementary Documents

SI Metric Guide for Junior and Senior High Schools (1978)
Elementary Science In-Service (1978)
Oceanography Handbook (1983)

Program Description

Primary — Grade 6

The elementary science program provides experiences which will encourage positive attitudes to science, and develops science skills which will serve as a basis for scientific concept development in later years.

The skills which are to be taught are: observing, classifying, using numbers, measuring, communicating, predicting, inferring, finding variables, and, in the later elementary years, formulating hypotheses, controlling variables, interpreting data and experimenting. The development of these skills and positive attitudes to science will provide a firm foundation on which the junior high program can be based.

By the end of grade 3, students would be expected:

(a) to make observations in the classroom and field situations and write them down in words and numbers as appropriate;
(b) to classify on the basis of appearance (color, size, texture, shape) and similarities and differences (e.g., plant vs animal, living vs non-living, push/pull, roll/slide);
(c) to use numbers obtained by counting, in data tables, and to compare measurements;
(d) to measure length, volume, temperature, and time in SI Metric units;
(e) to communicate in speaking, writing sentences, line diagrams, simple charts and bar graphs;
(f) to draw simple inferences from experimental work and field observations.

By the end of grade 6, students would be expected:

(a) to make quantitative and qualitative observations and record them in chart form, graphically or in writing;
(b) to classify on the basis of schemes which have been developed by using real specimens or have been derived from their study; e.g., animals as insects, amphibians, mammals, etc.; plants as flowering, woody, non-flowering, grasses, etc;
(c) to use numbers: as measurements, to compare, to make graphs and calculations related to experiments (e.g., determination of pressure);
(d) to measure length (area, volume), liquid volume, time, angles, temperature;
(e) to communicate in speaking, writing descriptive paragraphs, through diagrams, drawings, graphs, charts, data tables, and in reading directions for doing experiments and understanding suitable resource books (e.g., STEM, Level 6);
(f) to experiment by following directions and being able to design simple experiments so that: outcomes can be predicted and verified; explanations can be made for the results observed; the data are interpreted logically; variables are recognized and controlled individually; and suggestions for further experiments are made.

Detailed program planning in elementary science is to be undertaken within the school, or school system with reference to the teaching guide to provide a program suited to facilities, equipment, and resources at hand, including outdoor environments. Children should be introduced to a core of topics from the biological, geological, and physical sciences, and there should be sequence in topic development.

Recommended Topics

PRIMARY GRADE
Provision of concrete experiences which teach the skills of observing, classifying, measuring, and communicating, such as growing plants and caring for animals, nature walks, and engaging in discussions and activities which demonstrate such concepts as up/down, near/far, fast/slow, push/pull, roll/slide, and living/non-living.

GRADES 1 and 2
Unit 1 — Using The Senses and Classifying
2 — Properties, Measurement and Change
3 — Organisms — Seeds and Plants
4 — Animals
5 — Water and Air
6 — Moving Things

GRADES 3 and 4
Unit 1 — Plants
2 — Identifying Substances (Mystery Powders)
3 — Measurement and Motion
4 — Rocks and Soil
5 — Living Things and Environments
6 — Heat
7 — Sound
8 — Magnets

GRADES 5 and 6

Unit 1 — Communities of Living Things
2 — Life Cycles of Plants and Animals
3 — Chemical and Physical Change
4 — Electricity
5 — Changes in the Earth
6 — Weather
7 — Weight, Volume, Buoyancy
8 — Communication
9 — Forces and Their Effects
10 — The Solar System and Beyond

Grades 7-9

At this stage of development, students should become familiar with concepts in biological, chemical, geological, and physical science, and in addition they should have developed the related study, reading, and mathematics skills. The emphasis of the junior high science program is on attitude and skill development.

GRADE 7

Topics: ecology, plants, oxygen and food, land formation and change, measurement, introduction to chemistry.

GRADE 8

Topics: classification of living things, geological history of the Earth, electricity and magnetism, mechanics. The cell is an optional topic.

GRADE 9

Topics: ecology (continued), vertebrate birth, pure and impure substances, density and pressure, heat and kinetic molecular theory. Optional topics, some of which would be expected to be included in the course, are: astronomy, oceanography, light, sound.

GRADE 7-9 ADJUSTED SCIENCE

The adjusted program has been provided for students who are experiencing difficulty in the regular science program. The science courses reflect the overall goals of the adjusted program with particular emphasis on communication and mathematical skills and on developing curiosity and a sense of wonder, encouraging an understanding of the uses of science in everyday life, and an appreciation of the environment. The methodology which is recommended includes laboratory work, field trips, films, and selecting topics which are concrete and relevant to pupils' everyday experiences and interests. Less emphasis is expected on written resource material than in the regular science course.

Because there is a need for a flexible approach to the topics taught and the kind of texts which are useful to a particular class, no one textbook will be found to be satisfactory for all students. Materials such as the *Elementary Science Study* or *Schools Council 5-13* will provide the activity oriented approach, a broad range of topics, and the emphasis on skill development which is appropriate for students in the adjusted program.

Suggested Topics

Year 1: Insects or plants, personal hygiene, snow and ice, states of matter, measurement, weathering, and erosion.

Year 2: Trees, microscope or microprojector work, brine shrimp, electricity and magnetism, solutions and crystals, sound, rocks and minerals, earthquakes and volcanoes, space travel.

Year 3: Pond, stream, or seashore study, aquarium or terrarium study, carbon burning and fuel, simple machines, chemistry of foods, history of the Earth.

Grades 10-12

At the end of junior high school, students will have had broad experiences in most areas of science. Concepts and generalizations based on laboratory and field investigations of non-abstract material will be understood. It remains for senior high science courses to broaden and deepen these concepts and, in addition, to provide theoretical and abstract explanations for phenomena which have been investigated only in concrete terms before.

Through the use of school library resources, students will be able to develop the learning skills of finding, organizing, analysing and applying information in a critical and objective manner.

Students planning to enter science related courses in university will require mathematics and should take, in order of priority, PHY 441 (541), CHE 441 (541), BIO 441 (541). Oceanography and geology are planned for students who wish extra courses beyond the minimum required for this purpose or students not planning to do further work in science in university or technical schools.

BIOLOGY 221 (BIO 221)
This course is provided for students who do not require a science credit for university entrance. More emphasis is placed on the practical applications than on the theoretical aspects of biology. In addition to basic biological concepts, science skills and environmental concerns will be included. Laboratory exercises, field trips, and projects are an integral part of the course.

Topics required: an introduction to biology and science, environmental biology, cellular biology, diversity among living things, human biology. Optional topics are: investigation of vocations having a biological orientation, marine biology, microbiology, agriculture, forestry, animal behavior.

BIOLOGY 421 (BIO 421)
Two approaches to this course are available — an ecological and a traditional approach. While the ecological approach is recommended whenever feasible, the traditional is provided for schools where staffing or lack of suitable environments make it impossible. Both approaches are designed to provide an introduction to biology for students who do not wish to study it further and to provide the necessary background for those who wish to continue the study of biology. Process is as important as content.

Topics include ecology structural diversity in plants and animals and the cell Suggested optional topics for the ecological approach are marine plants and animals pollution forest and wildlife management biogeography soil Optional topics suggested for the traditional approach are plant and animal behavior comparative vertebrate morphology and anthropology

BIOLOGY 521 (BIO 521)

The BSCS Green Version Biology Program provides the basis for this honors course It is inquiry-oriented and emphasizes an ecological approach It is intended that it be taught to highly motivated selected students who are able to study more theoretical material successfully and engage in more individual and group projects prepare research papers and benefit from additional laboratory investigations

Topics include ecology diversity of plants and animals the cell study of a selected environment

BIOLOGY 441 (BIO 441)

Prerequisites Biology 421 or 521 Chemistry 431

This course is a continuation of Biology 421 Students may elect to take it in the second year of high school however it is recommended that students who plan to enrol in this course be encouraged to take Chemistry 431 previously or concurrently with it

Topics include reproduction cell chemistry and physiology general vertebrates and vascular plants human anatomy and physiology and optional topics chosen among microbiology embryology current issues in biology behavior or human behavior Appropriate laboratory investigations are to be included

BIOLOGY 541 (BIO 541)

Prerequisites Biology 521 Chemistry 431

This honors course is an appropriate follow-up to Biology 521 It contains a minimum of one BSCS Laboratory Block which emphasizes laboratory skills and scientific procedures A minimum of five of the eight units listed are required This flexibility will enable course planners to take advantage of local resources environments interests of teachers and pupils and available texts and reference books Listed units include cell physiology genetics animal growth and development plant growth and development human physiology evolution field ecology animal behavior

CHEMISTRY 431 (CHE 431)
Prerequisite Physical Science 421, if available

The high school program is divided into two courses, Chemistry 431 and Chemistry 441. The Chemistry 431 course aims to introduce students to science through chemistry in a way that will provide both a worthwhile and interesting terminal course and a foundation for future study. The more rigorous material required for students taking post-secondary chemistry is reserved for Chemistry 441. It is assumed that all students will complete the content of both courses by the end of Chemistry 441; the recommended topics for each level are listed.

Topics: introduction, matter, solids, liquids, gases, atomic theory, Periodic Law, chemical bonding, formula writing, balancing chemical equations, stoichiometry, percentage composition, mole concept, empirical formulas, molecular formulas, mass-mass problems, organic chemistry, introduction, hydrocarbons, carbohydrates, biochemistry, environmental chemistry.

CHEMISTRY 531 (CHE 531)
Prerequisite Mathematics 421

This honors-level course is based on the CHEM Study Program. It emphasizes chemical principles rather than descriptive chemistry, the relationship between experiment and theory and the significance and capabilities of scientific activities. Topics included are as follows: introduction to chemistry, the gas phase, liquids and solids (kinetic theory), solutions, solubility and ions, periodic table, atomic structure.

CHEMISTRY 441 (CHE 441)
Prerequisite Chemistry 431, Mathematics 421

This is a continuation of the Chemistry 431 course. Topics: gases, Boyle's Law, Charles' Law, Dalton's Law, kinetic molecular theory, combined laws, problems, solutions, solubility, concentration, electrolytes and non-electrolytes, ionization, chemical energy, heats of reactions, Hess's Law, rates of reaction, collision theory, chemical equilibrium including Ksp, acids and bases, theory, pH, Ka, salts and hydrolysis, oxidation-reduction, electrolysis, electro-chemical cells, balancing equations. Optional units: nuclear chemistry, colloidal chemistry, descriptive chemistry.

CHEMISTRY 541 (CHE 541)
Prerequisite Chemistry 531, Mathematics 431

This is a continuation of the Chemistry 531 course. Topics: chemical bonding, energy effects in chemical reactions, the rates of chemical reactions, equilibrium in chemical reactions, aqueous acids and bases, oxidation and reduction, molecular structure, chemical bonding in gases, liquids and solids, the chemistry of carbon compounds.

In addition to these materials, as time permits, projects of interest to pupils should be undertaken. These should be laboratory oriented. Suggestions are: qualitative analysis, quantitative analysis, descriptive chemistry, topics from organic chemistry, petroleum, plastics, textiles, bio-chemistry, environmental chemistry.

GEOLOGY 241 (GEL 241)

This course emphasizes the science of geology and completes the sequence of high school completion courses in science which includes Biology 221 and Physical Science 231. It aims to explain the earth to students using the expertise and knowledge of geologists. This explanation includes discussions of mineral and energy resources, the history and structure of the Earth and the changes it undergoes, and an introduction to economic geology and its effect upon the environment. The biology, chemistry, and physics learned previously will be reviewed as necessary and incorporated into this course.

GEOLOGY 441 (GEL 441)

This course is designed to contain a balanced survey of the various aspects of the subject. Considerable emphasis will be placed on Canadian and Nova Scotia environments.

Topics include: composition of the crust — minerals, rocks, chemical composition, volcanoes, weathering, mineral resources, erosion — downslope movement, rivers, wind, glaciers, shorelines, ground water, internal processes — earthquakes, continents, oceans, plate tectonics, Earth history including reference to solar system.

OCEANOGRAPHY 331 (OCE 331)

Suggested Prerequisite: Biology 421 or Biology 221

This course is designed to provide an integrated approach to science, using the ocean as its theme and source of practical examples. It is useful only to schools which are located close enough to the ocean to have ready access to it. It is not recommended for students planning to enter university unless they are also intending to complete chemistry, biology, and physics courses; rather it is designed as an introductory course in oceanography in which aspects of geology, physics, chemistry and biology are studied. Application of oceanography to chosen topics of current interest are included (e.g., the fishery, aquaculture, off-shore oil exploration, tidal power). A student handbook, available at the School Book Bureau, includes laboratory procedures and student notes.

It is essential that appropriate field trip and laboratory investigations be included in the program for each of its aspects.

PHYSICAL SCIENCE 421 (PHS 421)
The aim of this course is to prepare students for high school chemistry and physics courses by developing the scientific and mathematical skills required. It is inquiry-oriented and requires the use of a laboratory-classroom and equipment which, while simple, will be required in some quantity. This course is not intended to replace Biology 421 as the usual science in grade 10, but is provided in addition to it for schools where the need for it has been identified.

Core topics: science and scientific methods, measurement — principles and techniques, graphing, volume, mass, and density. Optional topics: heat, motion, Boyle's and Charles' laws, radioactivity, light. Throughout, emphasis is placed on the development of positive attitudes to science, self-confidence, and the understanding and application of scientific principles and techniques. *Any overlap with the content of the Chemistry 431 and Physics 431 courses is to be avoided.*

PHYSICAL SCIENCE 231 (PHS 231)
This course is designed to be a terminal course in physical science. Emphasis is placed on the chemistry and physics which can be readily illustrated by common phenomena and which will provide a basic understanding of these sciences as used in the home and in vocations. Emphasis on unnecessary terminology or abstractions is to be avoided. Much of the material will be science applied to familiar phenomena. The listing of core and applied topics will facilitate flexibility in course planning.

Topics include: chemistry, heat, electricity, mechanics, and sound. To meet the goals of the course, it is necessary to incorporate extended laboratory time and to utilize field trips, resource persons and other available resources.

PHYSICS 431 (PSY 431)
Prerequisites: Mathematics 421, Physical Science 421
if available

The importance of physics as a basic science must be stressed and all students should be encouraged to study it as a basis of further academic or vocational work as well as a means of better understanding the world around them. It is essential to further work in chemistry and geology and to an increasing extent is needed in biology.

Success in physics requires an ability to understand and apply mathematical concepts. Teachers must be sensitive to the problems which some students face in this regard and assist them, particularly at the beginning of the course.

Topics to be included: mechanics, waves, sound, light.

PHYSICS 531 (PHY 531)

Prerequisite: Mathematics 421, Physical Science 421
if available

This honors level course is based on the PSSC Physics material. In this material, "physics is presented not as a mere body of facts, but as a continuing process by which men seek to understand the nature of the physical world." It involves closely related laboratory work and films.

Required topics: how light behaves, reflections and images, refraction, the particle model of light, introduction to waves, waves and light, interference, light waves, motion along a straight line path, vectors, Newton's Laws of Motion, motion at the Earth's surface.

PHYSICS 441 (PHY 441)

Prerequisites: Physics 431, Mathematics 431

This is a continuation of the Physics 431 course.

Topics: mechanics (continued), heat, electricity, magnetism, modern physics.

PHYSICS 541 (PHY 541)

Prerequisite: Physics 531, Mathematics 431

This is a continuation of the Physics 531 course.

Topics and laboratory investigations: universal gravitation and the solar system, momentum and the conservation of momentum, work, power, energy, kinetic energy, some qualitative facts about electricity, Coulomb's Law and the elementary electric circuits, the magnetic field, electromagnet induction and electromagnetic waves, the Rutherford atom, photons, atom and spectra, matter waves.

Social Studies

Teaching Guides

Social Studies for Elementary Grade Levels (No. 77, 1981)
Adjusted Program (Academic) — Social Studies (No. 63, 1980)
*Geography, Grades 7-12 (No. 3, 1973)
History, Grades 7-12 (No. 7, 1976)
Modern World Problems (No. 10, 1976)
Civics and Citizenship, Grades 7-9 (No. 11, 1978)
Canadian History and Canadian/North American Geography (No. 11, 1978)
Sociology 12 (No. 14, 1978)
Economics 11, 12 (No. 15, 1978)
Canada Studies 10 (No. 17, 1979)
Political Science 12 (No. 27, 1978)
Geography 10-12 (No. 39, 1979)
Senior High School — Law (No. 10, 1978)
*Only the grades 7 and 9 parts are applicable. Geography 10-12 replaces grades 10-12.

Program and Course Descriptions

Primary — Grade 6

The elementary level social studies program combines local, national, and global components and provides both for studies of those elements familiar to the students — home, school, neighborhood, community — and for studies of other homes, neighborhoods, communities, and regions in Canada and elsewhere. A multi-spiral approach provides the national and global aspects needed to help the students understand the interdependence of all peoples.

The program is based on the concepts of identity, socialization, environment, change, resources, human needs, institutions, interdependence, values, and decision making, which lead into generalizations. Four basic groups of attitudes — self-awareness, respect for others, awareness and acceptance of uncertainty, respect for the natural environment — are a part of the total social studies program at the elementary level.

The program is not just geographically and historically oriented but also includes aspects of sociology, anthropology, economics, and political science. The affective and psychomotor domains are emphasized as well as the more traditional cognitive aspects, and the program is designed to develop students to higher levels of each of these domains.

The work of each grade level is divided into a number of units, with objectives, suggested activities, skills, and resources (identified for the various units). The themes with their unit titles are:

Primary Orientation
Unit I — Who am I?
Unit II — What is my school like?
Unit III — Who are the members of a family and how do they help each other?
Unit IV — What is a neighborhood?
Unit V — Why do we need rules?

Grade 1 — Families
Unit I — What is a family?
Unit II — What are basic and human needs and how are they satisfied?
Unit III — What is my school like?
Unit IV — Who are the people in my neighborhood and other neighborhoods?
Unit V — Why are rules needed?

Grade 2 — Community/Communities
Unit I — What is a community?
Unit II — How do people in a community earn their living?
Unit III — How do people "belong" to a community?
Unit IV — How do people and communities celebrate special days/holidays?
Unit V — How do communities depend on each other?

Grade 3 — Canadian Communities
Unit I — What is a community? (continuation)
Unit II — What are the basic map and globe skills?
Unit III — How are Canadian communities similar to and different from each other?

Grade 4 — People and Their Changing Environment
Unit I — How do we learn about the past?
Unit II — How have some communities changed?
Unit III — How do changes in technology change society?
Unit IV — How have transportation and communication changed through time?
Unit V — How have roles and values changed over the years?
Unit VI — What is pollution, and how does it affect us? (OPTIONAL)

Grade 5 — Canada and the World's People
Unit I — What are some of the main physical features and political divisions of Canada and the world?
Unit II — Who were some of the explorers and where did their explorations take them?
Unit III — What is life like in selected areas of the world?
Unit IV — What are some of the factors which influence population?
Unit V — What are some of the ethnic/cultural groups in Canada?

Grade 6 — Nova Scotia (and Atlantic Canada)

Unit I — Who were the first known inhabitants, and how did they use the environment to meet their needs?
Unit II — Who were the early European explorers of Atlantic Canada, and why were they important to the Europeans?
Unit III — Why did European people settle and fortify Nova Scotia (and Acadia)?
Unit IV — What is meant by multiculturalism and why is it of interest and value to us in Nova Scotia?
Unit V — How has the physical environment influenced the way people lived and are living?
Unit VI — What is meant by "service industry" and how important are these industries to Nova Scotia?
Unit VII — What is meant by "government" and why do we have government? (OPTIONAL)

Development of the units calls for integration with language arts, music, physical education, health education/growth and development, mathematics, and other subjects. The use of community resource people for many units, especially for units involving the culture of ethnic groups, is recommended.

Evaluation is carried out on a daily basis through pre-tests before and during units, and post-tests after units, and, more importantly, on observation of individual and group work in classroom projects, field trips and other research, in discussion, and in reports, in writing, drawing, models, etc.

Grades 7-9

Social studies in grades 7-9 consists of units on geography, history and civics. Where possible and appropriate, teachers should integrate topics. The main components are skill development and the understanding of terms relating to geography and history, a basic understanding of geographical regions in Canada and North America, a general understanding of the historical (including cultural) development of Canada and of the relationship of history and geography, a general understanding of European geography and the roots of Canadian history, a basic understanding of democratic government and of individual and group roles in government.

GRADE 7
SOCIAL STUDIES — CANADIAN GEOGRAPHY/
PRE-CONFEDERATION CANADIAN HISTORY/
LOCAL GOVERNMENT

Geography — Units are: Overview of Canada, The Local Region, The Atlantic Region, The St. Lawrence-Ottawa Lowland, The Great Lakes Lowland, The Near North, The Far North, The Prairies, Western Mountains and Valleys.

History — Units are: Canada Before the Europeans, The Arrival of the Europeans, The French in North America to 1660, The English in North America to 1664, The French at Their Height in North America — 1660-1713, The Fall of New France — 1713-1763, Growing Pains in British North America — 1763-1800, British North America during the Napoleonic Wars, A Growing Frontier Community.

Civics — Units include: Social Units, Why government?, Electoral Process; Structure of Local Government; Municipal Institutions and Services; Indigenous People of Nova Scotia, You and the Law, Community Awareness; Current Affairs.

GRADE 8
SOCIAL STUDIES — NORTH AMERICAN GEOGRAPHY/ RECENT (CONFEDERATION TO PRESENT) CANADIAN HISTORY/PROVINCIAL GOVERNMENT

Geography — Units are: Introduction, The Northeast, The South, The Midwest, The Great Plains, The Western Mountains and Plateaus, The Pacific Coastland.

History — Units are: Movement Toward Political Reform, The Union of British North America, The Age of Macdonald, Canada Enters the Twentieth Century, Canada in the Twentieth Century.

Civics — Units are: Historical Background to Provincial Government, Provincial Electoral Process, Structure of Provincial Government, Provincial Services and Agencies, Provincial Laws, Community Awareness, Current Affairs.

GRADE 9
SOCIAL STUDIES — EUROPEAN GEOGRAPHY/ BRITISH HISTORY/FEDERAL GOVERNMENT

Geography — Units are: Introduction (to Europe and the Soviet Union), British Isles, Mediterranean Lands, Scandinavia, Western Europe, Soviet Union.

History — Themes include: The Evolution of Parliamentary Government — The Queen and Parliament, From Feudal Society to a Middle Class Society, The Rise of Capitalism, Role of the Church, Evolution of Empire, Britain and Europe, Who Runs Britain?, Development of Political Parties, Rise of the Working Class, The Arts, England and Ireland.

Civics — Units are: The Democratic Process, Structure of the Canadian Federal Government, Federal Power, Federal Elections, Monies for Government, Federal Legal System, Forms of Government, International Affairs, Current Affairs.

SOCIAL STUDIES IN THE ADJUSTED PROGRAM
This three-year program consists of five basic units: Earth, Local Area, Atlantic Canada, Living in Canada, Living in North America, and seven subsequent units which build on the first five: World Cultures, 20th Century, Current Events, Consumer Education, Citizenship and Government, Mass Media, Headliners Past and Present.

A multi-disciplined, practical approach, both in terms of social studies (i.e., geography, history, economics, political science), and by integration within other disciplines (e.g., language arts, music, art, mathematics), is to be encouraged.

Grades 10-12

At this level students should have some understanding of the processes of cause and event, of primary and secondary documents, and of the distinction between fact and fiction, and will have the related skills. If they have not attained a reasonable reading level and skill development, special efforts should be made to develop these as well as to teach suitable content.

Through the use of the school library, students should have the opportunity to become aware of the variety of learning resources to support research projects and supplement the classroom resources.

History

In teaching senior high history, teachers are reminded that it is not sufficient for the students to be able to cite a long list of facts if the students do not understand anything of their significance, and therefore, do not understand history.

CANADA STUDIES (CAS 321)
This course provides students with the opportunity to examine contemporary Canada from a variety of viewpoints. Units include: Physical Environment, Pluralism, Political Life, Economic Life, Anglophone/Francophone Relations, Canadian/American Relations, Canada and the World, Canadian Culture. Generally, the course will provide an overview of certain aspects of Canadian life, but studies on a wide range of issues and questions are included.

HISTORY 421 — ANCIENT/MEDIEVAL HISTORY (HIS 421)
This course allows students the opportunity to develop an understanding of the concept of civilization through the examination of the origins of civilization and a comparison of the various civilizations which have shaped the nature of the modern world. There are six broad chronological divisions in the course: (1) The Evolution of Man, Social Animal; (2) The Birth of Civilization (Mesopotamia, Egypt, China, etc.); (3) Greece, The First Western Civilization; (4) Rome, Ruler of the Ancient World; (5) The Middle Ages; (6) The Renaissance and Reformation. Each of these divisions can be considered from a number of points of view, including geography, archaeology, society, language, religion, politics. Major themes could be developed spanning the broad chronological period; for example, agriculture, development of government, religion, revolutions. A study could also be made of (1) The Emergence of Civilized Man; (2) The Emergence of the First Western Civilization; (3) The Evolution of Western Civilization; (4) The Emergence of European Nations; (5) Development of Renaissance Man.

HISTORY 431 — HISTORY OF WESTERN EUROPE (HIS 431)
This course covers the period from the sixteenth century (slightly overlapping the Ancient/Medieval History course) up to present day (without going into too much depth on modern world problems). Because of the flexibility of the grade 10 course, teachers should provide whatever background is necessary (i.e., key developments in later Middle Ages) to bring the students to a reasonable starting point for this course.

The themes of the course — absolutism, revolution, ideology, conflict — can be traced chronologically or can be considered in the light of specific geographical areas.

HISTORY 231 — 20th CENTURY WORLD (HIS 231)
This course should focus on significant events in the world in the present century with related historical aspects included where required in order to give proper background and focus to these events.

Events involving many areas of the world (e.g., World War I, the Depression), as well as events and topics involving selected areas (e.g., emerging countries in Africa), should be included.

HISTORY 441 — HISTORY OF NORTH AMERICA/CANADA (HIS 441)

At present, teachers have a choice of four different approaches to this course: (1) a survey course on North American history, (2) Canadian-American relations (which is a more selective way of studying North American history), (3) Canadian history from the centralist point of view (usual approach to Canadian history), (4) Canadian history from a Maritime perspective (allows for a more detailed look at Maritime development and influence).

Emphasis should be placed on the political, constitutional and selected military aspects of Canadian history, without ignoring economic, social and cultural aspects. Selected topics currently important in Canada (e.g., the constitution, Canadian unity, Quebec) should be given careful consideration.

HISTORY 241 — CANADIAN HISTORY (HIS 241)

This course should build on the Canada Studies course. It should consider the social, cultural, and selected economic aspects of Canadian history. Selected political, constitutional, and military aspects should also be considered, according to the needs, interests, and abilities of the students.

Related aspects of American history should be included, as well as Atlantic Canada's role in Canadian events. There should be a balance of topics between the pre- and post-confederation periods.

Geography

GEOGRAPHY 421 ENVIRONMENTAL GEOGRAPHY (GEO 421)

The aim of this course is to develop awareness of the processes that have contributed and continue to contribute to the shaping of our physical environment, both at the local level and across the globe. It also serves to illustrate the close relationship between people and their environment, and emphasizes the significance of the effects of human activities.

Although theoretical explanations of physical processes will be stressed, laboratory work in the form of map usage, plotting, graphing, aerial, and ground photo studies should be an essential part of this course. Field trips are also considered to be very important for giving students first-hand knowledge of key geographical features and the relation of people to them.

GEOGRAPHY 221 ENVIRONMENTAL GEOGRAPHY (GEO 221)

This course, although similar in many respects to Geography 421, places greater stress on basic geographical techniques and skills and on field work and the local environment. The course also lays greater stress on the consequences and implications of the physical processes as they affect people. Theoretical explanations of the physical processes should be kept to a minimum.

GEOGRAPHY 321 GEOGRAPHY OF ASIA (GEO 321)

This course should provide students with an understanding of the geographical and climatic features of Asia, and a knowledge of the way people live and earn their living. Units include: Soviet Union and Mongolia; Southwest Asia (Middle East); South Asia (Indian Subcontinent); East Asia (China and Japan); Southeast Asia

GEOGRAPHY 431 CANADIAN GEOGRAPHY (REGIONAL AND THEMATIC) (GEO 431)

This course covers contemporary Canadian geography with its many regional and cultural diversities, and includes a systematic examination of such general characteristics as Canada's vast area, its northern character, limitations imposed by the climate, potential economic development, and Canadianism. In the first half of the course, Canada is studied both in the context of its continental North American setting and through its component regions and sub-regions. The second half will provide a thematic treatment of such topics as pollution, urbanization, resource development, changing technology, rural life.

A prior knowledge of the physical environment of Canada will greatly help students taking this course.

GEOGRAPHY 231 GEOGRAPHY OF CANADA (REGIONAL APPROACH) (GEO 231)

This course is designed to give students an image of Canada which depicts its wide variety of natural and cultural landscapes, while at the same time giving the students an understanding of the "Canadian identity" which makes Canadians different from people in other areas.

Regional units to study are: The Atlantic Region; The Great Lakes — St. Lawrence Lowlands; The Canadian Shield; The Continental Interior; Western Mountains and Coasts; The Far North. Local field work and research are an important part of this course.

GEOGRAPHY 441 SETTLEMENT GEOGRAPHY (GEO 441)

The aim of this course is to increase the pupil's understanding of the spatial organization of urban and rural settlement and settlement systems, and to understand how these evolved, and will continue to evolve, both inside and outside Canada. It also aims to show students that order exists in human-environment relationships; how historical developments have influenced settlement patterns; and what impact urbanization processes have had and continue to have upon rural areas. Units include: Urban Settlement, Rural Settlement, Rural-Urban Interaction, Community Analysis and Planning, with special emphasis given to Atlantic Canada.

A prior knowledge of both physical geography and the geography of Canada is desirable for studying this course.

Economics

ECONOMICS 331 CANADIAN ECONOMICS (ECO 331)

This course begins with a general study of the economy of the local community, leading into selected aspects such as important private firms, important occupational groups, local unions, three levels of government, government spending, taxation, and expanding to the provincial and regional economy to consider primary, secondary and tertiary industries. Distribution of wealth and power, labor movement, free enterprise, crown corporations, taxation, economic ties with the world are also considered as parts of the Canadian economy. Various economic principles, issues, and theories which affect the lives of students are included.

ECONOMICS 441 NATIONAL/INTERNATIONAL ECONOMICS (ECO 441)

This course, an extension of Economics 331, provides for a deeper study of selected economics issues as well as consideration of certain theories. The unit on microeconomics considers such topics as demand and supply, product differentiation, production, markets. Macroeconomics considers national accounts, economic indicators and government policy, money, banking, and finance, economic growth. There are also three optional units: history of economic ideas, international economy, and comparative economics.

It is recommended that students wishing to take this course take Economics 331 first.

Modern World Problems

MODERN WORLD PROBLEMS 341 (MWP 341)

This course can be approached from several different points of view, with the development of intelligent discussion on current world problems being the major aim. Topics for consideration would be prejudice, development, "hot spots", The United Nations, developing countries, revolt and revolution, sovereignty and territorial rights, NATO, the Warsaw Pact and the arms race, multi-national trade blocs, energy, the New Economic Order.

A number of other topics could also be considered, but the depth of coverage and emphasis would depend on whether or not courses in urban geography, law, political science, sociology and/or ecology were taught. These might include urban development and planning, courts and punishment, comparative government, elections, poverty, ecology.

Political Science

POLITICAL SCIENCE 441 (POS 441)

This course is a three-part course with Part 3 being optional. Part 1 develops an understanding of the concept of politics. Part 2 develops Canadian politics in its many aspects. Part 3 develops a comparative study of democracy and totalitarianism. Part 3 should only be taught to students who have gained a good understanding of their own system of government.

The course should be available to third-year students, and may include second-year students at the discretion of the teacher, principal, and guidance counsellor.

Sociology

SOCIOLOGY 341 (SOC 341)

This course is designed to give an understanding of the basic aspects of sociology to allow for in-depth studies in Canadian sociological issues, and to allow for active participation of the students in a local community/sociological project. Canadian sociological issues which might be considered are the family, students and schools, poverty, minority groups, women in society, labor and management, conflict, crime in Canada, punishment and rehabilitation, the future.

The course should be available to third-year students, and may include second-year students at the discretion of the teacher, principal, and guidance counsellor.

Law

LAW 341: CANADIAN LAW (LAW 341)

The law course is designed to provide students with (1) a knowledge of law and its function in society, and (2) the attainment of skills and attitudes that will enable students to understand the process of law. Topics include: the Canadian legal system, crimes and crime control, injuries and wrongs, human rights, property rights, promises and agreements, business relations, family relations, courts and trials.

The course should be available to third-year students, and may include second-year students at the discretion of the teacher, principal, and guidance counsellor.

Vocational Education

Guides

The Role and Function of Vocational School Counsellors (No 20 1979)
Carpentry (No 48 1980)
One-of-a-Kind Vocational Programs (No 6 1980)
Applied Science (No 50 1980)
Mathematics Courses In Secondary Vocational Schools (No 52 1980)
Bricklaying (No 51 1980)
Vocational Education Communications (No 59 1980)

Applied Academic Subjects

RELATED MATHEMATICS

The technical nature of most occupational areas requires the student to be knowledgeable of mathematical concepts In today s society students will be exposed to a variety of consumer situations requiring mathematical skills Progress in the occupation can be facilitated by an ability to analyse and solve problems in mathematics

To meet these needs each secondary vocational program includes a related mathematics course as an integrated part of the occupational curriculum

RELATED SCIENCE

The related science course in regional vocational schools consists of the fundamentals of science as these fundamentals apply to shop practice and the broad needs of an occupation The science in vocational schools must be based on the shop courses for the content taught and the examples used it requires close integration with the shop program and the support of the shop teacher

RELATED COMMUNICATIONS

Communications is one of the courses described as a related subject and in this respect it is similar to mathematics and science Related subject courses apply fundamentals of the subject concerned to shop practice In the case of communications this means that the student s ability to communicate must be developed within the context of the language needs of the shop in which the student is enrolled The communication course thus complements and supports the occupational program concerned it differs from an academic course in this regard

Vocational Courses

ACCOUNTING

This program covers a concentrated study of accounting Course content includes business English business mathematics business law office procedures and data processing Graduates may find employment in a variety of business operations

COSMETOLOGY

This program covers all basic aspects of cosmetology and prepares the student to qualify as a certified general hairdresser. Special emphasis is placed on hair styling. In addition, students will have the opportunity to learn operating procedures of a beauty salon. Course topics include: haircutting, curl formation, roller control, wave shaping, shampooing, permanent waving, hair coloring, conditioning, rinses, scalp treatments, cosmetic make-up and facials, manicuring and salon management. Upon completion of the program, graduates may take the examinations of the Association of Nova Scotia Hairdressers. They may advance into the field of cosmetics, hair styling, or work as technicians or platform artists.

BRICKLAYING

This program covers all basic aspects of the bricklaying trade such as the laying of all types of brick, concrete blocks for walls and buildings, building of fireplaces and chimneys, conforming to the local and national building codes. Course topics include mortar and its properties, tools and equipment, squaring corners, cutting, parapet walls, slush walls, joining, pilasters, pipe chases, estimating and blueprint reading. Upon completion of the program, graduates may write the Department of Labour and Manpower's second-year examination. Graduates may enter the bricklaying trade as apprentices.

BUSINESS ADMINISTRATION

This program deals with business principles as they affect the distribution of goods and services. Course topics include marketing, advertising, purchasing, inventory control, sales, business mathematics, accounting, personnel supervision, business principles, typing, data processing, business finance, credit procedures, business law, oral and written business communications, business ethics and economics. Graduates of this program may find employment in a variety of businesses and they may also pursue professional certification as accountants with organizations such as the Association of Certified General Accountants and the Society of Management Accountants.

CARPENTRY

This program covers all basic aspects of the carpentry trade such as constructing, installing, erecting and repairing buildings and wood products conforming to the local and national building codes. Course content includes: blueprint reading, estimating, tools and equipment, wall covering, cabinets, stairs, exterior and interior finish, scaffolding, framing. Upon completion of the program graduates may write the Department of Labour and Manpower's second-year examination. Graduates generally enter the construction field as apprentices.

CLERK TYPIST

This program is designed to prepare the student to enter and progress in the business world as a general office clerk. Special emphasis will be placed on the use and operation of typewriters, theory and techniques of letter composition and office practice and procedures. Course topics include: record keeping, related English and mathematics, calculating and duplicating machines.

GRAPHIC DESIGN

This program covers all aspects of commercial art and graphic design with special emphasis on the field of advertising and graphic arts. Course content includes materials, media and basic tools, history of art, drawing skills, lettering and layout, basic reproduction processes, photography, color and design, advertising and graphic design. Graduates may find employment with advertising agencies, newspapers, printing and engraving firms, large retail stores, government departments and other related industries.

COOKING

This program covers all basic aspects of the cooking trade. Students will have an opportunity to learn all aspects of the trade, including the operation and management of food service areas, sanitation, physical hygiene, and safety. Instruction and practice will also be given in baking, and meat cutting. Upon completion of the program, graduates may write the Department of Labour and Manpower's first year examination. Graduates generally enter the cooking occupation.

DATA PROCESSING

This program covers all aspects of the data processing field and prepares the student to qualify for entry into the field at the junior programmer/analyst level. Special emphasis is placed on the use of computer languages such as RPG, Fortran, Cobol and Assembler. In addition, machine operation, program and system analysis as well as exposure to the management and operation of data processing centres is included. Course topics include punch card and diskette equipment, sorter and collator, analysis and design of computer systems, accounting, communication and business practices. Graduates find employment opportunities in small businesses as well as government and larger corporations. They generally enter the field as junior programmers or operators and progress to senior programmers and analysts.

DINING ROOM SERVICES

This program covers all aspects of dining room services to prepare the student for efficient preparation and serving of meals to patrons in hotel dining rooms, restaurants and other eating establishments. Students will have an opportunity to gain experience in public relations, dining room operation, and advanced food service, e.g., American, English and French styles, flame cooking, wines and spirits, menu translation, banquets and buffets. Practical training is given in the school dining room. Graduates may enter the occupation as a waiter or waitress.

DRAFTING — ARCHITECTURAL

This program covers all basic aspects of architectural drafting. Course content consists of laying out, dimensioning and lettering of instrument drawing in both orthographic and pictorial projection, elements of structural framing, design and drawing of buildings based on local and national building codes. Graduates of the program generally enter the field as junior draftspersons.

DRAFTING — MECHANICAL

This program covers all the basic aspects of the drafting (mechanical) occupation. Course content includes the use of instruments, lettering, layout of drawings, dimensioning, orthographic and pictorial drawings. In addition, metal prototype development, pipe drawing, structural and machine parts and design will be covered. Classroom theory of power transmission and control of motion is applied in the design of cams, gears, linkages, and mechanical drives. Graduates of the program generally enter the field as junior draftspersons.

ELECTRICAL CONSTRUCTION WIRING

This program covers basic aspects of electrical construction wiring and prepares the student to qualify as an apprentice in construction, manufacturing, marine installations and repair and service industries.

This course includes the wiring of single family dwellings, industrial and commercial installations based on the Canadian Electrical Code and local regulations. Course topics include installations of stationary motor controls, furnace controls, transformer principles and connections, alarm systems, DC & AC motors and controls, electromagnetism, circuit construction, entrance services, blueprint reading, estimating, safety and the use of tools. Graduates, upon completion of the program, may write the Department of Labour and Manpower's second-year examination. Graduates find many employment opportunities as the increased use of electrical and electronic devices is now demanding highly skilled electricians.

ELECTRONICS

This program is designed to prepare students for employment principally in the industrial electronics field. The main aim is to provide the student with a thorough understanding of basic theory and extensive experience in the use of test equipment. AC and DC theory, semi-conductors, low frequency theory, as well as basic operation of testing equipment and soldering techniques are covered. The course progresses through the theory and practical applications associated with commercial receivers, transmitters, antennae systems, television, operational amplifiers and digital electronics. Graduates may find employment opportunities in a variety of areas in the electronics industry.

MARINE ELECTRONICS

This program covers all aspects of marine electronics with special emphasis on developing a sound knowledge of the principles of electronic theory and practice. The course will deal with practical electronic circuits and equipment construction, systems diagnosis, system performance checking and elementary design concepts. Course topics include: tools, electrostatics, magnetism, current and resistance, paralleled D.C. circuits, network analysis, inductance, capacitance, solenoids and relays, fuses, measuring devices, power and audio transformers, solid state devices, vacuum tubes, sensors and transducers, technical report writing. Graduates may find employment in the field of navigational aids, however, the program is sufficiently broad to ensure that the graduate could adapt to any field in electronics.

HEAVY DUTY EQUIPMENT REPAIR

This program covers all basic aspects of the heavy duty equipment repair trade. This course includes the basic principles of diesel engines, operation, repair and calibration of various systems, e.g. fuel injection, governing, cooling, exhaust, etc. The repair of parts and components, trouble shooting and making final adjustments to the engine, auxiliaries and components. Upon completion of the program, graduates may write the Department of Labour and Manpower's second year examination. Graduates generally enter the heavy equipment repair occupation as apprentices.

INDUSTRIAL ELECTRICITY

This program consists of all the basic aspects of electricity as it pertains to industrial operations. Course content includes: use of meters and testing equipment, installation, maintenance, and repair of electrical machinery and control systems. Installation methods are similar to those in electrical construction wiring and must meet the same standards as specified in the local and national building codes. Upon completion of the program, graduates may write the Department of Labour and Manpower's second-year examination. Graduates may find employment in various industrial plants or factories as maintenance electrician apprentices.

INDUSTRIAL INSTRUMENTATION

The program covers all aspects basic to industrial instrumentation such as the installation, calibration and maintenance of instrumentation systems in industry. Course topics include safety, use of hand and power tools, measuring devices, electronic instrumentation, system layout, installation and service, hydraulic instruments and systems as well as trouble shooting and diagnosis. Graduates may seek employment in industry as instrument technicians.

INDUSTRIAL MECHANICS (MILLWRIGHT)

This program covers all the basic aspects of the industrial mechanics trade. The industrial mechanic program offers instruction in the basic skills and knowledge required to install, erect, modify, repair, lubricate, and maintain mechanical equipment and machinery used in industry and manufacturing. Course content includes use and care of hand tools, machine tools, metallurgy, welding and cutting (arc and acetylene), blueprint reading, and sketching, principles of hydraulics, pneumatics, bearings, and clutches, basic electricity, use of metal turning lathe, shaper, milling machines, drilling machine and grinder. Upon completion of the program, graduates may write the Department of Labour and Manpower's second year examination. Graduates may find employment in the various industrial plants and factories as apprentices.

MACHINE SHOP

This program covers all the basic aspects of the machinist trade such as the making and repair of machine parts, using hand layout tools, precision measuring tools, cutting tools, drilling machines, lathes, shapers, milling machines, surface grinders and tool and cutter grinders. Elements of metallurgy, heat treatment of metals, and repair of more complex machine components are dealt with, enabling the student to enter the machinist trade and other related occupations. Upon completion of the program, graduates may write the Department of Labour and Manpower's second year examination. Graduates generally enter the machinist trade as apprentices.

MARINE FITTER

This program covers all aspects basic to marine diesel mechanics such as the fundamental knowledge and maintenance of small gas engines and diesel engines, and a more extensive knowledge of the diesel engine and major overhauls. Course topics include basic electricity, basic refrigeration, hydraulic systems, marine gears, winches, water pumps, and deck equipment. Graduates, upon successful completion of the program may be credited with ten months sea time towards a fourth class engineering ticket. Graduates are prepared for employment, both in marine and general engineering including the preparation for Ministry of Transport examinations.

MOTOR VEHICLE REPAIR — BODY

This program covers all aspects basic to motor vehicle repair (body) such as the repair and replacement of bodies and body parts of automobiles and trucks. Course topics include oxy-acetylene welding, sanding, filing, masking, priming and painting, as well as frame straightening, suspension systems, parts fitting methods, glass installation, identification of body parts, and job estimating. Upon completion of the program, graduates may write the Department of Labour and Manpower's second year examination. Graduates enter the automotive field as apprentices, with job opportunities in auto body shops, car dealerships and automotive service industries.

MOTOR VEHICLE REPAIR — MECHANICAL

This program covers all aspects basic to the motor vehicle repair (mechanical) trade such as the servicing and repair of cooling systems, exhaust system, brakes, suspension, basic electric and gas welding, alignment, wheel balancing, engine overhaul, transmissions, clutches, differentials, electrical systems, tune-up, diagnostic testing and repair using electronic instruments and steering systems. Upon completion of the program, graduates may write the Department of Labour and Manpower's second-year examination. Graduates generally enter the motor vehicle repair trade as apprentices.

NURSING ASSISTANT

This program covers all the basic aspects of nursing care and skill in applying these principles in clinical areas. Throughout the program the student receives instruction in theory and practice in the school's modern facilities, while a portion of the total time is spent in affiliation with hospitals in the local area. While working under the supervision of the professional nurse, the student gains experience in medicine, surgery, public health, care of mother and newborn, care of children, and care of the mentally ill. Upon completion of the program, the student writes examinations, which, if successful, qualify him/her to be a certified nursing assistant (C.N.A.). Graduates may find employment in hospitals, day care centres, and nursing homes.

PLUMBING

This program covers all the basic aspects of the plumbing trade such as the measuring, cutting, threading and installation of pipes and fittings, and sanitary facilities of buildings. Training is given in installing copper and plastic lines, copper and cast iron drainage systems and setting fixtures, installing hydronic heating systems, layout and estimating. Also included are blueprint reading, properties of materials, safety, drainage and venting, and pumps and knowledge of the local and national plumbing codes. Upon completion of the program, graduates may write the Department of Labour and Manpower's second year examination. Graduates generally enter the plumbing occupation as apprentices.

REFRIGERATION AND AIR CONDITIONING

This program covers all the basic aspects of commercial and domestic refrigeration and air conditioning such as the installing and repairing and maintenance of commercial refrigerators, deep freezers, coolers, display cases and small room air conditioners. Course content includes mathematics, electrical controls, blueprint reading, heat transfer and compression refrigeration systems. Graduates may find employment in repair shops or with large contractors. Upon completion of the program, graduates may write the Department of Labour and Manpower's apprenticeship examinations.

MERCHANDISING

This program covers all aspects basic to merchandising and prepares the student to enter the field of retailing from the receipt of goods to consumer purchase. Special emphasis will be placed on customer relations and personality development. Course topics will include buying, pricing and marketing, advertising, display, counter sales and record keeping, salesmanship, business math, communications, and graphic arts. Upon graduation, students may find job opportunities at both the retail and wholesale levels.

SHEET METAL

This program covers all basic aspects of the sheet metal trade such as the drafting and layout of patterns for all types of fittings for round or square pipes, irregular shapes, metal boxes and cabinets, and methods of pattern development including parallel lines, radial lines and triangulation, making components for heating and air conditioning and in the field of aviation. Upon completion of the program, graduates may write the Department of Labour and Manpower's second-year examination. Graduates generally enter the sheet metal trade as apprentices.

SMALL ENGINE EQUIPMENT REPAIR

This program covers all the basic aspects of repairing small engines. Course content includes use and care of hand tools, theory of small engines, ignition, timing, complete overhauls, and assemblies. Graduates may find employment as competent repairpersons in the small engine field.

STATIONARY ENGINEER

This program covers all aspects basic to the maintenance of steam boilers and associated equipment and prepares the student to qualify as a stationary engineer. The course covers the operation and maintenance of steam power plants from the small heating plant to the large industrial or thermal generating station. Course topics include engines and mechanical equipment, generators, motors, turbines, instruments, lubrication, gauges, measuring devices, feedwater chemistry, air compressors and high-pressure boilers. Upon completion of the program, graduates may write the Stationary Engineers Board's (Department of Labour and Manpower) examination for certification as a stationary engineer. Graduates may seek employment in construction, industrial plants, power utilities, hospitals, schools.

STEAMFITTING-PIPEFITTING

This program covers all the basic aspects of the steamfitting-pipefitting trade, offering comprehensive training in the theoretical and practical aspects of design, installation, and repair of gravity and forced hot water heating, hydronic heating systems, radiant panel installations and low and high pressure steam systems. Course topics include safety, hand tools, power tools, heating tools, oxy-acetylene and arc welding, maintenance and repair of oil burners, blueprint reading, electric and pneumatic controls, installation of boilers, radiators and unit heaters, rigging and pipes. Upon completion of the program, graduates may write the Department of Labour and Manpower's second-year apprenticeship examinations. Graduates generally enter the construction field as apprentices.

SECRETARIAL

This program covers all basic aspects of stenography to prepare the students to enter employment in business offices in such occupations as stenographer, secretary, and receptionist. Special emphasis is placed on skill development, speed and accuracy in typing and shorthand. Bookkeeping, text processing, filing, operation of duplicating machines, office machines and office procedures, business English, business mathematics and consumer fundamentals are also included in the program. The opportunity to obtain office experience is provided through on-the-job work training. At the completion of the program, the graduates may find employment in business offices.

STOCK CONTROL CLERK

This program covers all the basic aspects of inventory and stockroom control. Course content includes: use of telephone, public relations, inventory control, wholesale and retail sales transactions, displays, stock promotion, mathematics and use and care of hand tools and equipment. Graduates of the Stock Control Clerk program may be employed in wholesale or retail outlets and in various government departments.

WELDING

This program covers the theory and practice of oxy-acetylene welding and cutting, manual metallic electric arc welding, gas metal arc welding, arc air gauging and tungsten inert gas welding, spot welding and wire welding. Welding is carried out on most of the common ferrous and nonferrous metals. Course topics include basic metallurgy, welding, symbols, safety, blueprint reading, layout, hacksawing, hand filing, drilling, threading, hand and power tools, clamps and clamping devices, metal forming, taping and shaping, equipment, pipe templates and fundamentals of electricity. Graduates may take tests given by the Canadian Welding Bureau. Graduates generally enter the occupation as welders.

Programme des écoles acadiennes

Les buts de l'école acadienne

Toute école publique de la province a la responsabilité de travailler auprès des jeunes, les assistant dans leur formation afin qu'ils puissent vivre à l'aise dans la société, non seulement plus tard mais aussi durant leurs années à l'école, y jouissant d'une participation active et satisfaisante. Il est important qu'ils puissent se préparer à jouer des rôles de citoyens responsables, en développant à leur plein potentiel les qualités et les compétences dont la société a besoin.

Le rôle distinctif de l'École Acadienne en Nouvelle-Écosse est:

(a) de contribuer au maintien et à l'avancement de la langue française et de la culture des Acadiens dans leur province;
(b) d'aider les Acadiens à jouir pleinement de leurs droits en matière linguistique.

Les buts spécifiques

1. Développer les habiletés de communication à l'oral et à l'écrit en insistant sur la clarté et la précision dans l'emploi du français langue première et de l'anglais.
2. Développer une connaissance et une appréciation de l'identité acadienne sous toutes ses formes.
3. Développer les habiletés nécessaires en arithmétique et une connaissance des principes de base des mathématiques.
4. Développer une connaissance et une compréhension de l'histoire, surtout de l'histoire du Canada (y compris l'histoire des Acadiens) en sorte que les élèves deviennent conscients de leur patrimoine et de la diversité culturelle de leur pays, ainsi que des rapports qu'a le Canada avec les autres pays, et afin que leur formation leur permette de porter jugement sur les valeurs contemporaines.
5. Développer les habitudes et les méthodes de la pensée critique et cultiver le désir naturel de s'instruire et de comprendre.
6. Développer des connaissances, des habitudes, des attitudes, ainsi que le sens des responsabilités et des valeurs, afin que les élèves acadiens puissent participer pleinement à la vie de la société et qu'ils puissent aspirer à y contribuer dans tous les domaines et à tous les niveaux.
7. Offrir aux élèves, à l'intérieur des programmes et des activités scolaires, l'occasion:
   (a) d'exercer la créativité en encourageant l'originalité et l'imagination;
   (b) de stimuler leur curiosité et de développer une connaissance et une appréciation de soi, de ses semblables, de son environnement, et des rapports entre ces trois.
   (c) d'acquérir des habitudes, des attitudes et des habiletés intellectuelles qui leur seront utiles, tant pour l'entraînement à un emploi que pour l'exercice d'un emploi;

(d) de développer des connaissances, des habitudes et des habiletés qui leur permettront de jouir d'une bonne santé et d'une bonne condition physique;

(e) de développer la responsabilité civique, sociale et morale.

La langue de l'instruction

Elémentaire

De la maternelle à la sixième année toutes les matières sont enseignées en français, sauf le cours d'anglais qui est introduit au début de la troisième année ("Grade" trois).

Secondaire, premier cycle

A ce niveau (7e à 9e) les élèves suivront un minimum de dix (10) cours en français avec au moins trois (3) cours en français par année scolaire.

Secondaire, deuxième cycle

A ce niveau (10e à 12e) les élèves suivront un minimum de huit (8) cours en français avec au moins deux (2) cours en français par année scolaire.

N.B.: Le nombre de cours qui doivent être suivis au secondaire, premier et deuxième cycles, accorde une proportion raisonnable de temps à l'enseignement en français et en anglais, toutefois, si une commission scolaire juge qu'il lui serait possible d'offrir un plus grand nombre de cours en français, soit au premier ou au deuxième cycle du secondaire, elle peut le faire pourvu que cette décision soit bien acceptable à la communauté desservie par l'École Acadienne.

Les programmes des écoles acadiennes

Français

Guides pédagogiques

Le français à l'élémentaire, M à 6e année (édition de rodage, Nos 71 à 75, 1981)
Le jeu et l'expression dramatique à l'élémentaire (No 83, 1983)
Programme de français, 7e à 9e année (No 85, 1983)
Le français au secondaire, 7e à 12e année (1975)
Expression dramatique, 7e à 12e année (1983)
Programme de français, 10e à 12e année (en préparation)

Suppléments

Le roman, 7e à 12e année (No 14, 1978)
Une technique de présentation pour travaux écrits au secondaire (No 4, 1977)
Téléguide, Le monde des petits — français, M-3, pour élèves de langue française
Téléguide, Peinture et papier — français, 4e, 5e et 6e années, pour élèves de langue française

Maternelle à 6e année

Programme et descriptions de cours

Le développement de l'aptitude à s'exprimer oralement est d'une importance primordiale et déterminante dans l'évolution et l'épanouissement de l'élève en tant qu'individu. Le programme de français doit essentiellement avoir pour but d'aider l'enfant à exprimer ce qu'il observe, ce qu'il ressent et ce qu'il pense. Toutes les activités du programme consistent à l'inciter à communiquer clairement sa pensée aussi bien que ses sentiments; on se trouve ainsi à valoriser la personne en affermissant le sentiment d'identité et d'ouverture à autrui.

Les quatre aspects essentiels de l'art de communication sont ordinairement classifiés ainsi:

- écouter et parler (expression orale);
- lire et écrire (expression écrite).

Afin d'amener l'enfant à parler un langage correct il est nécessaire qu'il apprenne à écouter avec sensibilité et discrimination. Les exercices d'écoute forment une partie intégrante du programme de français. Il faut bien marquer l'importance qu'on doit accorder à la lecture à haute voix par le professeur. Les textes choisis, plaisants par leur sujet et leur présentation, offrent un intérêt assez puissant pour éveiller chez l'élève un amour de la lecture qui est si nécessaire à son développement ultérieur. Ces lectures sont à la fois des périodes de détente et de réflexions qui devraient fournir à l'élève une occasion de s'exprimer oralement. L'aptitude à l'expression orale se produit lorsque l'élève est encouragé à exprimer ses propres idées, pensées et sentiments, en employant, dès le début, des structures correctes et des phrases complètes.

L'enrichissement du vocabulaire se fait par un système d'écoute et de répétition à un âge où l'élève est à l'initiation du langage. Il importe donc de 'faire parler' tous les élèves et aussi souvent que possible. Le jeune élève accepte qu'on lui fasse reprendre son idée sous une forme correcte et vivante surtout lorsque la technique du vocabulaire est bâtie autour d'activités conformes à ses intérêts et l'encourage à la créativité. La participation à des jeux d'expression dramatique, de théâtre, et de marionnettes est autant un moyen pour développer l'expression orale.

La lecture apporte un précieux complément au développement du vocabulaire. Elle permet à l'élève à la fois d'explorer un domaine ou un centre d'intérêt, de se familiariser avec des termes et des tournures et de les assimiler progressivement. Une bonne intégration de la lecture rend plus efficace l'enseignement du français.

La consolidation des mécanismes de lecture doit se poursuivre et s'affirmer dans l'écriture. Une bonne connaissance de l'orthographe et de la grammaire reste un facteur important pour que l'enfant arrive à rendre compréhensible et vivante une pensée simple transmise dans un texte écrit. La linguistique moderne d'inspiration structurale a profondément modifié la pédagogie de la grammaire. L'élève est amené à voir comment une construction, en subissant de légères transformations, peut donner naissance à d'autres constructions, ce qui lui apprend à manipuler sa langue avec souplesse. Pour développer cette souplesse, l'élève doit avoir l'occasion d'écrire souvent

L'EXPRESSION DRAMATIQUE À L'ÉLÉMENTAIRE

L'expression dramatique est une méthode dont peut se servir l'enseignant du français pour permettre aux élèves de s'exprimer verbalement. La communication verbale présuppose certaines habiletés qui entourent les quatre savoirs.

L'art dramatique peut aussi faciliter l'apprentissage des autres matières. De plus, c'est pour l'enfant un moyen de mettre en valeur un potentiel créatif et de développer sa personnalité.

Le guide pédagogique *Le jeu et l'expression dramatique à l'école élémentaire* présente l'expression dramatique sous trois aspects: l'expression corporelle, l'expression verbale et l'improvisation. L'enseignant y trouvera des activités indiquées pour les différents âges scolaires de la Maternelle à la 6e année.

Niveau secondaire (7e à 12e année)

Par le programme de français à ce niveau, l'élève devrait perfectionner l'habileté de communiquer ses pensées et ses émotions. Pour communiquer pleinement, l'élève doit s'engager tout entier dans l'acte de communication en se sensibilisant à l'usage précis et nuancé de la langue. On stimulera son enthousiasme et son amour-propre pour qu'il exprime clairement et aisément ses expériences, ses idées et ses opinions personnelles.

Le but principal de l'enseignement du français est d'amener l'élève à améliorer son expression orale (écouter et parler) et son expression écrite (lire et écrire).

Le programme d'étude au secondaire présente une continuité qui vise à une cohésion dans l'enseignement et dans l'apprentissage du français de la maternelle à la douzième année. Le passage du premier cycle au deuxième cycle du secondaire devra continuer et favoriser le développement d'une plus grande maîtrise du français écrit et parlé.

L'apprentissage d'un français de plus en plus international ne devra pas se faire aux dépens de l'expression spontanée de l'élève acadien.

LES OBJECTIFS GÉNÉRAUX

- Faire comprendre et accepter à l'élève qu'en plus de sa culture acadienne il possède une langue qui est essentiellement bonne, mais qu'il doit développer et parfaire à un niveau acceptable qui se rapproche le plus possible du français international même s'il y a une richesse d'intonation régionale qu'il est bon de conserver.
- Faire comprendre et accepter la valeur du bilinguisme.
- Faire comprendre et accepter que même au niveau secondaire, premier et deuxième cycle, l'élève a besoin de continuer de se servir des quatre savoirs (écouter, parler, lire, écrire) pour atteindre la compétence voulue de sa langue maternelle.

LES OBJECTIFS PARTICULIERS: (Ecouter, Parler, Lire, Ecrire)
Continuer les quatre moyens d'apprentissage d'après les niveaux acquis jusqu'à la sixième année.

Ecouter — Viser à ce que l'élève se fasse une oreille à un français international et qu'il puisse entendre et saisir le pensée exprimée oralement. Ecouter suppose: (a) attention (b) calme (c) concentration (d) participation active (e) esprit critique.

Parler — Exprimer sa pensée d'une façon correcte et expressive.

Lire — Connaître les lettres et les phonèmes et savoir les assembler correctement, rapidement et sans effort. Savoir lire pour comprendre un message. Développer une facilité de compréhension de la langue, ce qui demande une maîtrise du pouvoir d'analyse et de synthèse.

Ecrire — Arriver à faire écrire l'élève d'une façon claire et correcte pour faciliter la compréhension et encourager la créativité.

LA LITTÉRATURE

Au niveau secondaire, surtout au deuxième cycle, l'étude de la littérature constitue une partie importante du programme de français.

Les buts généraux de l'étude de la littérature sont les suivants:

- jouir de l'expérience;
- développer des valeurs humaines pour soi-même et une tolérance pour les valeurs des autres;
- développer des normes pour juger les mérites de la littérature;
- développer une connaissance des termes littéraires;
- offrir aux élèves l'occasion de "vivre" l'expérience des autres;
- saisir le message d'un auteur;
- développer une appréciation d'un héritage littéraire;
- améliorer l'expression orale et écrite.

L'EXPRESSION DRAMATIQUE

Au niveau du secondaire l'expression dramatique continue à être un élément intégrant du programme de français. L'enseignant peut consulter le guide *Expression dramatique* (7e à 12e année) pour y puiser des idées et des activités qui conviennent à sa classe.

Au niveau du premier cycle surtout, l'expression dramatique aide dans l'apprentissage de toutes les matières.

Le drame (DRA 326) et le théâtre (DRA 336) sont deux cours facultatifs qui pourraient être offerts pendant les trois années du deuxième cycle du secondaire. Pour offrir ces cours, il faudrait être assuré de l'expertise nécessaire: soit une personne d'expérience dans ce domaine, soit un enseignant dont l'intérêt et l'enthousiasme pourra inspirer un désir de perfectionnement professionnel. Chacun des deux cours est de 120 heures et donne droit à un crédit, mais n'enlève pas l'obligation de suivre le "cours de français" requis en 10e, 11e et 12e année.

Premier cycle du secondaire

LE SAVOIR-ÉCOUTER

La pratique du savoir-écouter continue à jouer un rôle important au premier cycle du secondaire, à la mesure du rôle joué par les média audio-visuels dans la vie moderne.

Les activités d'écoute à l'élémentaire ont posé les bases de cet apprentissage et on peut considérer comme maîtrisées certaines habiletés — la discrimination auditive par exemple. Cependant il reste beaucoup à faire pour affiner la compréhension, améliorer la mémoire auditive et développer chez l'élève une attitude à la fois attentive et critique bien adaptée aux différentes situations d'écoute.

Il s'agit davantage de créer de bonnes habitudes que de donner des connaissances. Cet enseignement de bonnes habitudes sera le plus souvent occasionnel, mais on fera également des exercices systématiques.

LE SAVOIR-PARLER

Il est important de se rappeler que l'apprentissage de la langue écrite doit s'appuyer sur une connaissance solide du français parlé international.

Au premier cycle du secondaire on devra donc continuer le travail entrepris dans ce domaine au niveau élémentaire. On entraînera notamment l'élève à décrire et à raconter avec plus de précision, ainsi qu'à faire appel à des arguments rationnels pour convaincre ou persuader. On l'aidera surtout à acquérir la maîtrise d'une gamme plus étendue du niveau de langue qui lui permettra de communiquer de manière naturelle et efficace dans les situations les plus diverses. Tout en respectant la langue régionale, on insistera, à l'école, sur l'emploi du registre courant du français international.

On continuera de favoriser autant que possible l'expression libre de l'élève. Il faudra cependant souvent stimuler et diriger cette expression. Dans la classe de français, on multipliera les activités visant à créer des situations d'apprentissage très variées, à l'intérieur desquelles l'élève pourra améliorer ses techniques et ses habitudes de communication orale. De plus on exploitera les situations de communication qui existent naturellement dans le cadre de l'école, et tous les enseignants devront coopérer pour que le français y joue pleinement son rôle de langue de communication et d'apprentissage.

La correction des fautes devra se faire de façon à ne pas décourager l'expression spontanée. L'enseignant doit prendre comme point de départ la langue de l'élève et faire en sorte que se maintienne en chacun le souci de son amélioration constante. *Le bon exemple de la part de tous les enseignants demeurera le meilleur moyen de correction.* On pourra également utiliser les techniques et le matériel élaborés pour l'enseignement du français langue seconde, comme les exercices structuraux qui sont un remède efficace contre certaines fautes de syntaxe.

Il est d'importance primordiale que les jeunes Acadiens possèdent bien leur langue et soient fiers de la parler. C'est aux enseignants de leur faire voir que, loin d'être un "dialecte" minoritaire et isolé face à l'anglais, le français de l'Acadien est une branche vivante et originale de l'ensemble de la langue française qui fait aussi partie de leur patrimoine. Ils doivent leur en montrer toutes les ressources et les aider à mieux les employer.

Les habiletés suivantes seront développées:

- communiquer des messages oraux à caractère informatif, incitatif, expressif et ludique;
- paraphraser et commenter les idées exprimées par les autres;
- employer correctement les structures du français;
- employer un vocabulaire précis et expressif;
- adapter son expression orale aux circonstances.

LE SAVOIR-LIRE

Au premier cycle du secondaire on étudiera des textes appartenant aux différentes formes ou aux différents genres littéraires (nouvelles, romans, poèmes, fables, chansons, dialogues, légendes, articles de journaux ou de revue, etc.). Cependent on étudiera plus en détail une forme littéraire particulière à chaque niveau — un minimum de cinq ouvrages à chaque niveau.

7e année — la narration
8e année — la description
9e année — le portrait

A l'occasion de ces études on apprendra également à situer un ouvrage dans son contexte historique et social.

Les habiletés nécessaires seront acquises ou renforcées en cours de route, au fur et à mesure des besoins. Il s'agira d'abord de faire lire l'élève. Au premier cycle du secondaire, surtout en septième et huitième année, il ne faut pas se pencher trop sur les techniques.

A ce niveau l'élève n'étudie pas généralement une oeuvre littéraire en tant que genre littéraire. Il la rencontre dans son manuel de lecture, mais il a encore à apprendre les techniques de la lecture. Cependant l'élève qui n'éprouve pas de difficultés en lecture pourrait être initié aux éléments importants de la littérature tels que le personnage et l'intrigue. Il est essentiel de dégager l'idée principale et de retenir certains détails qui paraissent banals mais qui sont souvent fort significatifs. Des questions qui encouragent la réflexion peuvent servir à éveiller chez l'élève un goût de la lecture des grandes oeuvres littéraires qui seront étudiées en plus de profondeur au deuxième cycle du secondaire.

Le roman de la culture adolescente a sa place importante pour aider l'élève à se comprendre et à se situer dans le contexte de la vie moderne. Un minimum de deux romans devront être étudiés à chaque niveau. En s'identifiant avec les personnages du roman, l'adolescent pourra avoir une meilleure perception de lui-même. En plus, la lecture du roman lui offrira un moyen d'acquérir des habitudes en lecture qui lui serviront toute sa vie.

Les buts principaux de l'étude du roman sont:

- l'expérience agréable;
- l'identification;
- l'appréciation de la littérature.

LE SAVOIR-ÉCRIRE

L'importance que réserve le programme de français au premier cycle du secondaire à l'expression orale n'enlève pas à l'expression écrite sa valeur capitale comme moyen d'expression. Il est donc important de viser à un enseignement équilibré où l'apprentissage de l'écrit découle naturellement de celui de l'oral et où l'élève en arrive à manier les deux codes (oral et écrit) avec une même aisance. On devra même accorder à l'écrit une attention spéciale en raison de sa difficulté.

Les techniques d'écriture, à savoir l'orthographe d'accord et d'usage, la morphologie, la syntaxe et la rédaction, n'ont de valeur que dans la mesure où elles permettent l'expression écrite de messages significatifs. Il est donc essentiel de ne pas envisager les règles de grammaire comme une fin en soi. Il est indispensable, du reste, de faire acquérir ces techniques et connaissances dans toute la mesure du possible dans le cadre de *situations de communication* et *d'exercices significatifs*. Il est important que l'élève prenne l'habitude d'écrire précisément et correctement. On le fera surtout écrire souvent en soulignant la nécessité de la correction tout en lui faisant sentir que, s'il est normal de faire des erreurs dans cette activité difficile, il est tout aussi normal de les corriger.

La grammaire devra faire partie intégrante de la langue parlée et écrite. Si importantes que soient les connaissances grammaticales ce ne sont que des outils au service de la communication. *On n'insistera pas trop sur les règles et sur la correction de la forme aux dépens de l'expression.* La grammaire et l'orthographe seront surtout enseignées en liaison avec l'expression écrite et en fonction des besoins qu'un examen attentif des erreurs des élèves aidera à identifier.

À l'élémentaire l'élève a appris à rédiger de petits textes exprimant une variété de messages. On continuera ce travail au premier cycle du secondaire préférant *la rédaction de textes courts et fréquents* à de longues compositions périodiques.

On veillera à ce que ces textes correspondent autant que possible à des situations de communication, réelles ou simulées. À l'occasion de lectures et/ou d'études de textes on travaillera plus particulièrement des formes écrites traditionnelles: description, portrait, narration.

Deuxième cycle du secondaire

Le programme de français au deuxième cycle du secondaire devra continuer à élucider les habiletés de communication développées au premier cycle: écouter, parler, lire, écrire, présenter, dramatiser et réfléchir. Cependant les buts pour les élèves au deuxième cycle seront plus complexes; on s'attendra à ce que les élèves développent ces habiletés à un niveau plus élevé de sophistication et de compétence. On s'attendra également à ce qu'ils développent en plus de profondeur les habiletés ayant rapport aux besoins de décrire, d'expliquer, de persuader, de raconter, de percevoir avec exactitude, d'analyser clairement, de porter jugement, de sélectionner et d'évaluer. Ces habiletés connexes sont nécessaires pour la connaissance de soi et la communication interpersonnelle, ainsi que pour la maîtrise et la compréhension des matières imprimées et des autres média de la communication contemporaine.

L'étude de la littérature offrira à l'élève la possibilité de connaître des oeuvres de grande qualité et de pousser plus loin le niveau d'appréciation. Une sélection judicieuse sera faite de toute la littérature canadienne-française et de la littérature française. Il est important que les oeuvres littéraires soient choisies en fonction de l'intérêt et de la maturité des élèves à chaque niveau.

L'étude des oeuvres littéraires devrait être plus poussée tant au niveau de la pensée qu'au niveau de la technique.

L'enseignant devrait se rappeler que "l'expérience de la littérature" ne vient pas seulement des livres mais des revues, des disques, de la radio et de la télévision.

L'étude de textes littéraires devrait être plus poussée tant au niveau de la pensée qu'au niveau de la technique. Lorsqu'on fait l'étude de la littérature l'atmosphère qui est créée est d'une très grande importance. L'enseignant doit être ouvert à plusieurs systèmes de valeurs et aux opinions et attitudes qui en découlent.

La nouvelle, la pièce de théâtre, la poésie, le conte ou le roman choisi devrait donner l'occasion à l'élève de développer le goût de la littérature. Il est important d'étudier certains éléments tels que l'intrigue, le personnage, le milieu, le thème et le dialogue, surtout dans les oeuvres théâtrales. L'enseignant fera découvrir l'oeuvre au moyen de questions qui portent l'élève à réfléchir plutôt qu'au simple rappel des faits et des détails.

Au deuxième cycle du secondaire on devrait présenter à l'élève plusieurs occasions d'écrire afin de développer et d'avancer ses habiletés à écrire effectivement. L'écriture devrait être abordée avec accent sur la créativité, surtout dans les cours de la catégorie "4".

FRANÇAIS 426 (FRA 426)
Ce cours appuie sur le développement de l'habileté à lire et à écrire qui est essentiel pour réussir dans la série des cours de la catégorie "4" au niveau du deuxième cycle du secondaire. Un bon développement de ces habiletés exige un processus d'apprentissage continu. Il est donc important que l'enseignant évalue, dès le début du cours, le niveau de compétence acquis par ses élèves lors de leurs expériences au premier cycle du secondaire. Cette évaluation devra être suivie d'une attention particulière aux besoins de chaque élève ainsi qu'à sa compétence croissante dans tous les aspects de la langue française. Quoique la concentration sera mise sur les aptitudes à lire et à écrire, il est important que cet apprentissage s'appuie sur une connaissance solide du français parlé international.

Les concepts littéraires tels que le conflit, la caractérisation, l'humour et la comédie recevront une attention particulière. La recherche et les techniques d'étude seront accentuées. Tout le long du cours, l'enseignant devra évaluer le niveau d'accomplissement des élèves avant de procéder à une étude plus intense d'une forme littéraire ou d'une activité langagière particulière.

FRANÇAIS 226 (FRA 226)

Ce cours mettra plus d'accent sur l'aspect "pratique" de l'aptitude à lire et à écrire que sur l'étude en profondeur des oeuvres littéraires. Les élèves développeront leur capacité d'utiliser le français oral par l'intermédiaire de présentations et de discussions en groupe. L'enseignant tiendra compte des intérêts particuliers des élèves ainsi que de leurs besoins éventuels d'emploi. Dans ce contexte, le développement des habiletés à lire et à écrire sera basé sur des buts réalistes qui tiennent compte des aspirations, des besoins et des limitations des élèves. Ces buts seront établis après une évaluation des connaissances langagières des élèves inscrits dans ce cours.

FRANÇAIS 436 (FRA 436)

Ce cours continue le développement des aptitudes acquises au cours de Français 426. Dans la plupart des cas, les élèves inscrits au cours de Français 436 auront supposément terminé avec succès le cours Français 426. La compétence pratique est intégrée avec l'usage de la langue, et les élèves seront encouragés à penser, à parler, à écrire et à lire avec plus d'aisance et avec plus de satisfaction. Les élèves seront aidés à coordoner leurs propres pensées écrites et leurs études d'écrivains connus, de manière à ce qu'ils puissent apprécier et identifier des techniques de composition et d'enchaînement d'idées.

Une étude systématique des oeuvres littéraires canadienne-françaises sera faite dans un contexte mondial. Cette étude comprendra une variété de genres littéraires qui inclue les romans, les nouvelles, le drame et la poésie. Une étude détaillée du roman moderne sera faite; cette étude pourrait donner une attention spéciale aux romans psychologiques, sociologiques et réalistes ainsi qu'aux romans de science-fiction.

FRANÇAIS 236 (FRA 236)

Français 236 est le deuxième cours de la série des cours de la catégorie "2", et le préalable requis pour s'y inscrire sera normalement la réussite du cours Français 226. Ce cours insistera sur la communication orale et écrite à un niveau pratique. L'accent sera plutôt sur la communication informative que sur une étude formelle de genres littéraires. On donnera une certaine attention au langage de communication populaire. En même temps, les élèves seront encouragés à développer l'habitude de lire et d'écrire non seulement pour se renseigner, mais aussi comme agrément et pour en tirer une satisfaction personnelle. Il faut se fixer un idéal réaliste quant à l'aptitude de lire et d'écrire pour chacun des élèves inscrits dans ce cours, gardant à l'esprit leurs besoins futurs.

FRANÇAIS 446 (FRA 446)

Français 446 complète la série des cours de la catégorie "4", et la réussite du cours Français 436 est normalement requise pour être inscrit dans ce cours. Les élèves en Français 446 devront développer au plus haut degré leur compétence dans tous les aspects de la communication.

Les élèves auront à entreprendre une étude des genres littéraires importants. Ils feront une étude detaillée des genres suivants: ouvrages nonfictifs; romans variés qui présentent des idées complexes et des formes sophistiquées; oeuvres dramatiques; critiques sociales modernes; une bonne variété de formes poétiques. A la suite de l'étude de poèmes les élèves devront savoir bien formuler de façon logique leurs idées et leurs interprétations basées sur leur propre jugement. On portera attention aux principaux thèmes littéraires et humains et l'on fera aussi une étude comparative des travaux littéraires et des points de vue personnels de différents auteurs. En littérature on accordera une attention particulière à la tragédie, en tant qu'aspect humain et en tant que forme dramatique. Dans ce cours les élèves devraient développer leur connaissance de style littéraires basée sur leurs expériences en littérature.

Les aspects humains et sociaux des sélections littéraires étudiées doivent être examinés à travers tout le cours, avec un accent particulier sur le procédé d'évaluation personnelle. Les élèves deviendront de plus en plus indépendants dans l'usage de la langue et dans leurs habiletés littéraires. A l'aide des connaissances et des concepts acquis, ils doivent pouvoir arriver à une appréciation intelligente de questions littéraires et sociales, ainsi que formuler des réponses personnelles à la littérature et aux mass-media. Ils devraient aussi acquérir une compréhension du procédé d'évaluation qui est à la base de la pensée humaine et de la communication de cette pensée par la langue.

FRANÇAIS 246 (FRA 246)

Français 246 complète la série des cours de la catégorie "2" offerts au deuxième cycle du secondaire. La condition normalement requise pour admission est la réussite d'un cours de français des catégories "2". L'accent sera sur le renforcement des habiletés essentielles à la communication mais il faudra porter une attention constante à la compétence linguistique, tant à l'écrit qu'à l'oral. Le progrès déjà atteint par les élèves, ainsi que leurs aspirations professionelles pour le futur, influenceront le choix des activités pratiques qui doivent les aider à acquérir plus d'habileté et plus de confiance dans l'usage de la langue. La communication orale représente une partie importante de ce cours et elle devrait recevoir une attention particulière en rapport avec les besoins linguistiques, présents et futurs, de l'élève. A travers cette série de cours de catégorie "2" on accordera un certain degré d'importance aux genres littéraires, mais l'accent doit être sur la compétence linguistique dans des situations (soit sociales ou professionnelles) de communication quotidienne.

DRAME 326: LE DRAME (DRA 326)

Il s'agit d'un cours introductoire pour les élèves intéressés à l'art dramatique et au théâtre, mais on suppose que l'élève a déjà reçu une certaine formation en expression dramatique à l'intérieur des cours de français des années précédentes. Le cours est de nature à développer les ressources physiques, affectives et intellectuelles de l'élève, et il porte particulièrement sur la concentration, la sensibilisation, l'imagination, le contrôle physique et la communication sociale. Le contenu de cours comprend le mouvement expressif, l'interprétation orale, l'improvisation et les pièces écrites. L'enseignant peut faire valoir ses forces, ses intérêts et ses expériences dans le drame et concentrer son enseignement dans les domaines où il se sent le plus compétent. Le cours est centré surtout sur les aspects d'improvisation ou de créativité de l'art dramatique, mais il présente aussi une introduction à la présentation de pièces de théâtre.

DRAME 336. LE THÉÂTRE (DRA 336)
Le cours DRA 326 réussi est normalement préréquis pour s'incrire au cours DRA 336. Les élèves y trouveront l'occasion de découvrir des principes de l'art théâtral en s'adonnant à des jeux de rôles et à la réalisation de pièces de théâtre. Le travail théorique comprend la nature du drame, l'analyse, l'interprétation et l'appréciation de pièces de théâtre (d'une bonne variété de média et de styles), la composition de scènes et l'évaluation de présentations. Les activités pratiques comprennent du travail plus poussé dans l'art dramatique et dans l'improvisation, ainsi que dans le mouvement, l'élocution, le développement de rôles dans des pièces écrites et la mise en scène de courtes pièces écrites. Des projets tels que la composition de saynètes et de pièces, des enregistrements sur ruban magnétique et la création de décors pour une pièce en particulier, font également partie de ce cours. Les habiletés à écrire et à parler seront traitées en parallèle.

Arts visuels et arts plastiques

Guides pédagogiques

Arts plastiques, M à 3e année (No 64, 1981)
Arts plastiques, 4e à 6e année (No 69, 1982)

Programme et descriptions de cours

Maternelle à 6e année

L'expression au moyen des arts visuels peut se définir comme une réaction personnelle à l'expérience vécue ou imaginaire traduite par une forme ou une structure.

Les buts du programme sont d'aider l'élève à développer le goût du beau par la perception sensorielle, et de l'amener à s'exprimer par divers média, de façon personnelle, spontanée et créatrice.

Comme objectifs à moyen terme, le programme vise à inciter l'élève:

- à réagir aux formes, aux événements et aux matériaux de l'environnement;
- à percevoir les éléments fondamentaux de l'expression artistique, tels que: la ligne, la masse, la forme, l'espace, la couleur, la texture;
- à mettre au clair et à exprimer des expériences et des sentiments personnels par des formes visuelles au moyen de divers média et à travers différentes activités comme le modelage, la construction, la peinture, le dessin, la sculpture, le tissage, l'imprimerie;
- à partager ses expressions visuelles et les rattacher en général au travail des autres personnes;

- à profiter de toutes les occasions, à tous les niveaux, pour intégrer les arts visuels et les arts plastiques aux autres disciplines.

Les activités en arts visuels et en arts plastiques devraient être adaptées le mieux possible aux besoins de l'élève en rapport avec ses expériences personnelles. L'élève profite davantage des activités d'apprentissage lorsque celles-ci sont étroitement liées à ses expériences quotidiennes et à l'apprentissage des autres matières.

Le guide pédagogique *Arts plastiques, M à 3e année* offre à l'enseignant une variété d'activités simples portant sur les lignes, les couleurs, les formes, la masse, les trois dimensions, les textures, les merveilles du papier, l'imprimerie, la peinture, la ceramique, le personnage en mouvement et le bricolage.

Les activités décrites dans le guide *Arts plastiques, 4e à 6e année* sont destinées à des élèves un peu plus âgés et portent, en plus, sur le textile, la sculpture et différents genres de dessin.

Education physique et hygiène

Guides pédagogiques

Education physique à l'élémentaire (No 80, 1983)
Hygiène, développement personnel et social, M à 6e année (No 31, 1978)
Hygiène, développement personnel et social, 7e à 9e année (No 61, 1980)

Suppléments

Le vieillissement (No 29,1981)
Education physique, M à 3e année (1984)
Education physique, 4e à 6e année (en préparation)

Programme et descriptions de cours

Maternelle à 6e année

Les programmes d'hygiène et d'éducation physique ont comme but le développement sain de l'élève dans sa croissance physique et l'épanouissement de sa personnalité. Les programmes doivent tenir compte des aspects physiques et psychiques de la santé. Ils doivent aider l'élève à se comprendre lui-même et à se voir comme vivant en société en respectant ses semblables, la nature et les biens matériels.

Le programme d'*Hygiène*, tel que décrit dans le guide pédagogique "Hygiène: développement personnel et social", considère six thèmes principaux:

1. la santé physique;
2. les valeurs, les sentiments et la vie familiale;
3. la nutri [illegible]

4. la connaissance de soi et des autres, y compris la sexualité humaine et les différents stades du développement physique, social et émotionnel;
5. les drogues et l'écologie;
6. la consommation.

L'étude de ces thèmes s'étend le long de toutes les années du niveau élémentaire. Les activités suggérées sont désignées comme étant surtout adaptées soit aux années M-3, soit aux années 4-6.

Le programme d'*Education physique*, décrit dans les deux guides destinés à l'enseignement des niveaux M-3 et 4-6, est réparti en cinq sphères d'activités:

1. la gymnastique;
2. la rythmique;
3. le jeu;
4. les activités de plein air;
5. les activités de conditionnement physique.

Au niveau M-3 le programme cherche à développer les habiletés motrices perceptuelles prérequises à une coordination motrice plus complexe. L'appui est surtout sur les activités rythmiques, le jeu dramatique et l'apprentissage social. Les habiletés en communication jouent un rôle prédominant dans toute expérience d'apprentissage. Plusieurs de ces habiletés sont acquises en grande partie à travers les expériences personnelles de l'enfant, souvent dans le jeu. Lors des premières années scolaires les enfants trouvent dans le mouvement un moyen efficace d'expression de soi et de communication.

Au niveau 4-6 le programme cherche à étendre et à raffiner les habiletés, et il accorde plus d'importance aux activités éducatives en plein air. Le jeu et les expériences relatives au mouvement continuent leur rôle important chez les enfants alors qu'ils s'acheminent vers la maturité.

7e année à 9e année

Le programme d'*Hygiène* aux niveaux de la 7e à la 9e année est une continuation et un raffinement du programme d'hygiène de la maternelle à la 6e année; toutefois, ce programme est axé sur le développement personnel affectif et social de l'adolescent. Les objectifs proposés dans le guide pédagogique devraient être enseignés au temps considéré le plus approprié.

Les finalités du programme sont vraisemblablement les mêmes que celles du programme au niveau élémentaire. Au niveau de la 7e à la 9e année, une importance spéciale devrait être attachée aux changements physiques qui se manifestent durant l'adolescence.

L'instruction qui traite de la santé doit refléter un point de vue qui intègre les différentes dimensions de la santé physique, mentale et sociale. Le programme de santé vise à aider les élèves à se bien porter physiquement, émotionellement et socialement.

Afin d'éliminer la répétition d'une année à l'autre, la séquence suivante est suggérée:

7e année

La croissance et le développement du corps; l'âge de la puberté; le tabac, la marijuana, les solvants et les médicaments ordinaires; les attitudes et les valeurs; l'alimentation et la croissance; la sûreté et la sécurité.

8e année

La santé physique; le développement sexuel de l'adolescent et la génération humaine; l'alcool, les barbituriques et les amphétamines, le LSD, l'héroïne; les émotions; l'alimentation équilibrée; la pollution, la santé aux niveaux local, régional et mondial, et l'interdépendance des environnements; les premiers soins; les maladies.

9e année

L'hygiène mentale; les relations humaines; la classification des drogues, les conséquences du tabac, de l'alcool et des autres drogues; la personnalité; l'alimentation particulière; le vieillissement, la mort; la publicité, le crédit, les droits et les responsabilités du consommateur; les services de santé, les carrières, les agences.

Mathématiques

Guide pédagogique

La mathématique à l'élémentaire, M à 6e année (No 28, 1978)

Supplément

Points de repère en mathématique, 3e à 6e année (No 45, 1984)

Programme et descriptions de cours

Maternelle à 6e année

Le programme de mathématique à l'élémentaire se divise en trois thèmes généraux:

1. les opérations et les relations numériques;
2. les mesures;
3. les relations des formes dans l'espace.

Ces trois thèmes vont de pair et les activités mathématiques doivent fournir les occasions à l'élève de découvrir l'ordre, les structures et les relations qui forment la base des connaissances fondamentales en mathématique et qui sont nécessaires au développement des habiletés mathématiques.

Au début de l'élémentaire il faut permettre aux enfants de s'exercer à comparer et à classifier et trier avant de les faire travailler avec le concept du nombre. Ces habiletés préliminaires sont essentielles à l'apprentissage subséquent des mathématiques.

Avec l'implantation du système métrique l'accent se place sur le calcul décimal. Tous les élèves doivent arriver à posséder une méthode efficace de travail avec les nombres entiers et les décimaux pour chacune des quatre opérations: l'addition, la soustraction, la multiplication et la division. Ces méthodes se développent au moyen de la manipulation d'objets concrets dans les activités utilisant d'abord des objets réels et ensuite un materiel structuré tel les cubes 'unifix'; ainsi les concepts se maîtrisent davantage lorsque l'élève est en mesure de passer des représentations concrètes aux symboles numériques.

Le travail avec les fractions porte sur les demis, les quarts, les cinquièmes, les dizièmes et les centièmes. Les opérations avec les fractions ne sont abordées qu'en sixième année.

Voici quelques uns des concepts et des habiletés que chaque élève doit acquérir au plus haut point de maîtrise dont il est capable:

MATERNELLE À 3e ANNÉE

Nombres: opérations et relations. Lire et écrire les relations numériques en utilisant des objets concrets; utiliser correctement des mots signifiant "plus grand que", "moins que" et "égale" pour indiquer des relations; compter par sauts de 2, de 3, de 4, de 5, et de 10; reconnaître et continuer des structures numériques; connaître les notions de l'addition jusqu'à 18 et les notions de soustraction correspondantes; connaître les notions de la multiplication jusqu'à 5 × 5 et les notions correspondantes de la division; identifier ½, ⅓, ¼, ⅕, ⅒ d'une région; utiliser les décimaux de 0.1 à 0.9 et de 0.01 à 0.99 dans des situations réelles; additionner et soustraire des nombres à deux et à trois chiffres; multiplier des nombres à deux et à trois chiffres par un nombre à un chiffre; identifier l'existence de problèmes mathématiques dans la vie réelle et initier le développement de méthodes pour la solution de ces problèmes.

Géométrie: forme et espace. Classifier et trier des objets selon divers attributs; identifier, écrire et étendre les structures géométriques; reconnaître les formes géométriques dans le monde réel; construire des modèles à deux et à trois dimensions en différentes positions et de différentes grandeurs; identifier des formes symétriques; identifier des lignes de symétrie; créer des formes symétriques; identifier des figures planes congrues; montrer certaines propriétés des formes géométriques.

Mesures et rapports. Comparer et ranger des objets selon la longueur, la hauteur, le volume, la masse; estimer et mesurer en utilisant des unités non-conventionnelles; estimer et mesurer en centimètres, en mètres, en grammes et kilogrammes, en litres, en degrés Celsius; mesurer avec des instruments de mesure métriques; dire et écrire l'heure; comprendre semaines et mois; utiliser correctement l'argent pour acheter et faire de la monnaie; faire une collection de données; construire et interpréter des pictogrammes et des graphiques à bandes.

4e À 6e ANNÉE

Opérations et relations. Utiliser correctement les symboles de "plus grand que", "plus petit que", "égale" dans des phrases; trouver la solution d'équations et d'inégalités simples avec nombres entiers; résoudre des problèmes écrits; montrer une connaissance des propriétés de commutativité, d'associativité et de distributivité, ainsi que des propriétés du "zero" et du "un", en les utilisant comme moyen de simplifier les calculs; utiliser les modèles de multiplication et de division par 10, 100 et 1 000 pour estimer des réponses; utiliser correctement les algorithmes de la multiplication et de la division; entretenir une maîtrise des notions fondamentales de l'addition et de la soustraction ainsi que de celles de la multiplication et de la division; trouver les facteurs et les multiples d'un nombre; trouver le PGFC et le PPCM de deux nombres; lire et identifier les décimaux jusqu'aux millièmes; additionner, soustraire, multiplier et diviser des nombres décimaux; estimer des produits et des quotients de nombres décimaux; utiliser des décimaux dans la solution de problèmes; utiliser des rapports dans des situations mathématiques pratiques; trouver un pourcentage donné d'un nombre; montrer une compréhension des fractions par l'utilisation de matériel concret; résoudre des problèmes simples d'addition, de soustraction, de multiplication et de division en utilisant des fractions (surtout des demis, des quarts, des cinquièmes, des dixièmes et des centièmes); utiliser des nombres entiers dans des situations se rapportant aux sciences naturelles; ordonner des nombres entiers sur une droite numérique; identifier des situations qui présentent un problème mathématique dans la vie réelle et développer des stratégies pour résoudre ces problèmes.

Géométrie: forme et grandeur. Classifier, trier et identifier des formes géométriques à deux et à trois dimensions. Construire des modèles géométriques, identifier les sommets, les faces, les arêtes; identifier les parties d'un cercle; identifier des lignes de symétrie, des lignes perpendiculaires et parallèles, de différentes sortes de triangles; utiliser des instruments géométriques (compas, règle, etc.) pour construire des figures géométriques; tracer des réflexions et montrer des rotations et renversements de diverses formes géométriques; créer des dessins de patrons comme des arrangements en damier; montrer les propriétés des formes et les relations entre ces formes.

Mesures et relations. Estimer et mesurer en mètres, centimètres, millimètres, kilomètres, kilogrammes, grammes, litres, millilitres, degrés Celsius; utiliser correctement les préfixes du système métrique SI; trouver le périmètre, l'aire et le volume de diverses figures géométriques; situer des points sur un plan de coordonnées; lire et interpréter des tables, des tableaux, des graphiques; recueillir des données, construire et interpréter des pictogrammes, des graphiques à bandes et à lignes.

A tous les niveaux de l'élémentaire le programme doit faire appel à des méthodes et à des situations d'apprentissage diverses:

- une utilisation considérable de matériel concret lorsqu'on présente un nouveau concept;
- la possibilité pour chaque élève de pouvoir avancer à sa propre vitesse à travers les étapes de:
  - l'expérimentation avec le matériel;
  - la formation et la vérification d'hypothèses sur les relations qu'il perçoit;
  - la communication de ses découvertes, tout d'abord oralement ou à l'aide de diagrammes et ensuite par l'écriture de symboles;
  - les exercices en vue de fixer un concept qui a été compris. (Ces exercices doivent toujours suivre et non pas précéder la découverte.)

Comme dans toute autre discipline scolaire, il est essentiel que l'élève jouisse de son expérience en mathématique et connaisse un certain succès dans son travail. L'attitude de l'élève est de première importance. Il acquiert une attitude positive au moyen des nombreuses situations réelles, des activités, des discussions et de l'application à de nouvelles situations dans lesquelles il développe une confiance en lui-même face aux problèmes quotidiens.

7e à 9e année

Afin de rencontrer les besoins et les habilités des élèves du premier cycle secondaire, les expériences mathématiques doivent être assez nombreuses et variées. Elles doivent découler de l'apprentissage au cours des années précédentes et ainsi ceux qui planifient le programme doivent jouir d'une bonne connaissance du programme actuel de mathématique à l'école élémentaire. Afin de maintenir l'intérêt et la responsabilité de la part de l'élève, les enseignants doivent avoir recours à des techniques telles que les suivantes: investigations en petit groupe, expériences de laboratoire, jeux et puzzles, aides visuelles, matériel concret, applications à l'environnement, problèmes reliés à des situations réelles, projets, individualisation de certains aspects du programme.

Les enseignants doivent être conscients de la nature du programme de mathématique: un concept est introduit assez tôt et il est graduellement approfondi en y revenant périodiquement.

L'accent du programme de mathématique doit être sur le développement des concepts et des habiletés. La quantité de travail nécessaire va varier selon la classe et l'élève individuel.

7e ANNÉE
Revue des opérations et des propriétés des nombres entiers et des décimaux; habileté mentale en arithmétique, avec accent sur l'estimation de réponses et l'arrondissement; développement de compétence avec les fractions; facteurs, nombres premiers et nombres composés, PPCM, PGFC; solution de problèmes avec applications à des situations réelles, estimation, mesures métriques, rapports et proportions, pourcentages; problèmes de consommateurs; similitude; graphiques, statistiques, probabilités simples, relations, fonctions, graphiques avec coordonnées; équations, inéquations; nombres entiers; divers polygones et certaines de leurs propriétés; symétrie, translations, renversements, rotations; constructions géométriques simples; lecture et interprétation de tables, de tableaux, de cartes et de graphiques; stratégies pour la résolution de problèmes.

8e ANNÉE
Extension du travail précédent sur les nombres entiers, les décimaux, les fractions; nombres rationnels avec accent sur des applications, la résolution de problèmes, l'estimation; solutions d'équations et d'inéquations; relations, fonctions, graphiques avec coordonnées; racines carrées, nombres irrationnels, exposants, notations scientifiques; applications de mesures métriques (avec applications au périmètre, à l'aire, au volume); estimation, arrondissement, précision dans les mesures; théorème de Pythagore; rapports et proportions, pourcentage; échelles; problèmes de consommateurs; statistiques, collection de données, construction de graphiques, lecture et interprétation de tables, de tableaux, de cartes et de graphiques; probabilité;

transformations congrues et leurs propriétés, propriétés géométriques de figures planes, constructions simples, similitude; solution de problèmes avec triangles semblables; stratégies pour la résolution de problèmes.

9e ANNÉE — ACADÉMIQUE

Extension du travail précédent avec nombres entiers, nombre rationnels et irrationnels, exposants, approximation décimale des racines carrées, applications incluant le théorème de Pythagore; revue des mesures du système métrique SI (avec applications au périmètre, à l'aire et au volume), précision, estimation; relations, résolution d'équations et d'inéquations linéaires, graphiques de relations; évaluation d'expressions, addition et soustraction de polynômes, multiplication et division par un monôme, produit de deux binômes; facteurs communs, mise en facteurs de $1x^2 + bx + c$; rapports, proportions, pourcentage, taux, application en affaires et en commerce; transformations de dimensions, dessins à l'échelle; les transformations et leurs propriétés, descriptions algébriques de translations et de réflexions; propriétés des figures géométriques, comprenant les différentes sortes d'angles, de triangles, de quadrilatères et d'autres polygones, lignes parallèles et perpendiculaires, bissectrice d'un angle, bissectrice perpendiculaire, hauteurs, angles à l'intérieur d'un cercle, axes de symétrie, symétrie de rotation, constructions; revue et extension de ce qui a été vu sur les figures à trois dimensions; statistiques incluant l'organisation et la présentation des données, interprétation de tables et de graphiques, abus de statistiques; techniques simples de cueillette de données, incluant l'échantillonnage aléatoire.

9e ANNÉE — MATHÉMATIQUE AVEC APPLICATIONS DANS LA CONSOMMATION

Ce cours est destiné aux élèves qui ont besoin de plus de temps pour acquérir les habiletés de base et pour qui il est plus important d'appliquer la mathématique à des problèmes se rapportant à la consommation. Les besoins et les habiletés de ces élèves sont variés et il faut leur accorder toute possibilité de développer une compréhension et des habiletés qui leur seront utiles. L'enseignant doit les assister avec patience et leur fournir les occasions de goûter au succès en mathématique.

Le cours doit traiter les questions suivantes: lecture et interprétation des tables, de tableaux et de graphiques, utilisant des nombres entiers, des décimaux, des fractions dans des applications pratiques; mesures métriques; figures géométriques planes et solides, et certaines de leurs propriétés; rapports, proportions, pourcentage, arrondissement, estimation; dessins à l'échelle, graphiques; services bancaires, achat et vente de produits et de services, renseignements utiles au consommateur, finances personnelles; algèbre élémentaire.

PROGRAMME AJUSTÉ POUR LES ANNÉE 7-9

Le but principal du programme ajusté de mathématique est de développer l'habileté des élèves de faire une utilisation pratique de la mathématique dans la vie quotidienne.

Ce programme de trois ans comprend les sujets suivants: modèles numériques et habiletés; estimations; rapports, proportions; dessins à l'échelle; mesures; statistiques; géométrie appliquée; mathématique du consommateur.

L'élève doit procéder par de multiples activités d'apprentissage en utilisant du matériel concret lors de l'introduction d'un nouveau concept. Il doit franchir à son propre rythme les étapes telles que l'exploration avec objets concrets, la formulation et la vérification d'hypothèses découlant de relations qu'il a découvertes, la communication verbale, gestuelle, graphique et symbolique. Il ne faudrait pas négliger ces exercices, si l'on veut que l'élève assimile définitivement un concept qu'il a saisi. Toutefois la mise en application devrait suivre plutôt que précéder la découverte.

Musique

Guides pédagogiques

La musique à l'élémentaire, M à 3e année (No 47, 1980)
La musique à l'élémentaire, 4e à 6e année (No 86, 1984)

Programme et descriptions de cours

Maternelle à 6e année

La musique à l'élémentaire a pour but d'offrir aux élèves une expérience musicale bien équilibrée et suffisamment large. Les buts principaux sont le développement d'une réaction esthétique, le goût de la bonne musique et la déduction des critères de valeurs, ainsi qu'une prise de conscience du monde sonore. A chaque niveau, les activités musicales devraient être intégrées dans autant d'aspects de l'éducation que possible.

L'enfant est curieux de l'univers qui l'entoure et s'intéresse tout spécialement au monde sonore par ses propres expériences. Le programme devrait lui offrir la possibilité de vivre et de partager des expériences esthétiques et devrait lui permettre d'avoir des contacts avec le monde sonore. L'enseignant doit susciter une ambiance de recherche dans la joie d'explorer ce monde sonore.

Le point central à tous les niveaux de l'élémentaire est de familiariser l'élève aux différents éléments de la musique au moyen d'une participation active. La musique à ce niveau vise essentiellement l'assimilation du matériel sonore par une approche sensorielle de la musique orientée vers la participation de l'élève. Une grande partie du programme en musique doit donc être orientée vers les activités, que ce soit dans le domaine de la danse, du chant ou des mouvements rythmés et coordonnés. A cet effet, l'enseignant adoptera une attitude permissive, acceptera que l'élève procède à tâtonnements et permettra non seulement de faire de la musique, du chant ou de la danse mais aussi de jouer avec la musique, avec le monde sonore, et de découvrir le rythme. Le programme sera plus efficace si l'enseignant en musique travaille en collaboration avec les autres enseignants dans le but d'intégrer la musique aux autres disciplines scolaires.

Guide pédagogique

Sciences familiales, 7e à 12e année (No 68, 1981)

Suppléments

Sciences familiales pour les enfants et les jeunes en difficulté d'adaptation et d'apprentissage (No 31, 1982)
Le vieillissement (No 29, 1981)

Programme et descriptions de cours

7e année à 12e année

Le programme des sciences familiales dans nos écoles a comme but principal d'encourager les qualités qui assurent une vie familiale saine. La planification de chaque leçon devrait comprendre les trois idées principales suivantes:

- *les relations interpersonnelles* à travers l'étude de la vie familiale et de l'enfant;
- *la gestion* des ressources humaines et matérielles;
- l'éducation qui vise au développement d'*un sens de valeurs* acceptable, propre à fortifier la vie et la culture des individus, des familles et des communautés.

Les sciences familiales ne constituent pas la seule discipline traitant de ces aspects de la vie mais c'est la seule discipline qui les embrasse tous. L'étude des sciences familiales aide à façonner les parties et l'ensemble de la vie quotidienne, et elle s'intéresse aux cultures du passé ainsi qu'à celles d'aujourd'hui.

Le personnel enseignant devrait choisir les unités décrites dans le guide pédagogique d'après les besoins et les niveaux d'études des élèves. Compte tenu de ces facteurs et des ressources de l'école, il est possible d'aborder une unité donnée en n'importe quelle année du niveau secondaire. Il s'agirait d'une décision interne de l'école en question. Bien que certaines unités doivent être complétées par tous les élèves, aucun élève ne complétera toutes les unités. Il est possible de développer davantage, de condenser ou de combiner les unités pour en faire la matière d'un quart de crédit, d'un tiers de crédit, d'un demi-crédit ou d'un crédit complet. Ainsi, par exemple, il serait possible de combiner deux ou trois unités pour en faire un programme d'un an (120 heures) dans un sujet donné. En décidant le choix des unités à enseigner, les besoins et les intérêts des élèves doivent prendre priorité sur leur âge chronologique et sur leur niveau scolaire, tant au premier qu'au deuxième cycle secondaire.

Il arrive que des élèves (surtout des garçons) qui entrent à l'école secondaire entreprennent les études en sciences familiales sans aucune préparation. Il y aurait peut-être lieu de leur offrir un cours plus élémentaire en leur présentant le choix d'une unité ou d'une combinaison d'unités du premier cycle plutôt que les unités plus avancées du deuxième cycle. Il importe de rencontrer les besoins réels des élèves au plan de l'expérience acquise.

N.B.: Tous les cours de sciences familiales sont codifiés catégorie "3", e.g., Sciences Familiales en dixième année = HEC 326. (Le troisième chiffre "6" indique un cours donné en français)

ALIMENTS ET ALIMENTATION

De la maternelle à la sixième année, les élèves ont progressivement avancé dans leurs connaissances en alimentation, et l'on doit à ce point s'efforcer de relier à la vie pratique les connaissances acquises. On considérera la préparation des repas plutôt que les catégories de nourriture comme telles. On insistera davantage sur l'achat et l'emmagasinage des aliments. La flexibilité qu'offre ce programme ainsi que la liberté dont jouissent les enseignants de planifier leurs leçons permettent plus de temps pour développer des objectifs répondant aux besoins des élèves d'aujourd'hui.

PREMIER CYCLE SECONDAIRE

Les directives suggèrent cinq unités. A titre d'exemple, l'unité cinq pourrait s'étendre sur une période de trois ans pour les élèves plus âgés et peut-être aussi pour les élèves moins doués. Cela se fait déjà dans certaines écoles anglophones où le programme est intitulé "Junior Chefs" ou "Occupational Foods". Tous les élèves doivent compléter la première unité avant de procéder aux autres. Il est souvent possible de compléter les deux premières unités dans une seule année.

Unité Un — Les principes fondamentaux de la cuisine
Unité Deux — La planification et la préparation des repas simples.
Unité Trois — Les dîners — le repas principal
Unité Quatre — L'utilisation des aliments de la région et les habitudes alimentaires locales.
Unité Cinq — Le travail préparatoir pour une carrière en alimentation.

DEUXIÈME CYCLE SECONDAIRE

Au niveau du deuxième cycle secondaire le programme en alimentation est divisé en trois unités, chacune indépendante des autres mais toutes reliées entre elles. Ces trois unités peuvent constituer un programme excellent pour les élèves qui songent à des études universitaires nécessitant un intérêt particulier à ce sujet. En même temps le programme est assez flexible pour devenir un cours très pratique pour ceux dont l'intérêt se réduit à la préparation de simples repas de famille.

***Unité Un* — *Les repas de famille (1): La viande et autres aliments protéiques,* insistant surtout sur les alternatives et sur le procédé chimique de métabolisme.**
***Unité Deux* — *Les repas de famille (2): Glucides et lipides,* avec étude à fond des types d'aliments et de leur emploi dans le monde en général ainsi que chez certaines cultures en particulier.**
***Unité Trois* — *Aliments, production et marché* — additifs, lois, marché du travail, diète et santé, régimes.**

LES VÊTEMENTS ET LES TEXTILES

Cette partie du programme est peut-être celle qui reçoit le plus de commentaires négatifs. Il devient donc impératif que les enseignants précisent clairement leurs buts et objectifs et qu'ils les communiquent aux parents et aux étudiants. Une fois que les enseignants ont décrit en termes précis et réalistes ce qu'il est possible d'accomplir, on sera moins porté à trop exiger de cette section du programme. Les étudiants qui ont une idée claire de ce qu'on attend d'eux sont moins en danger de se créer de trop hautes espérences. En élaborant le programme avec soin, on peut donner aux unités Un, Deux et Trois un sens plus réel pour l'étudiant. Quelques ojectifs bien réfléchis et bien exécutés assurent la meilleure base pour un tel programme.

PREMIER CYCLE SECONDAIRE

L'unité quatre serait une occasion d'aborder une étude de l'artisanat. L'artisanat a une valeur concrète dans l'enseignement de principes élémentaires en couture. Il peut servir à créer un plus grand intérêt chez certains élèves, à développer l'originalité d'expression ainsi qu'une facilité d'expression de soi. La présentation de ces métiers peut aussi conduire l'élève à la découverte d'une carrière intéressante.

Unité Un — Les principes de base de la couture.
Unité Deux — Le travail pratique en couture
Unité Trois — Le travail plus avancé dans la confection des vêtements.
Unité Quatre — L'artisanat.

DEUXIÈME CYCLE SECONDAIRE

Unité Un — Le vêtement de la famille: le choix des étoffes disponibles; la mode adaptée à l'occasion; des styles de vêtement pour répondre à certains cas particuliers, e.g. les personnes handicappées; les couleurs et les tissus; l'achat des vêtements; le soin des vêtements; des techniques et l'art de confectionner les vêtements; l'art du travail à l'aiguille pour parfaire un ouvrage.

Unité Deux — La mode et le flair: ce qu'est la mode; l'influence de la haute couture, des média, des tendances locales; les tissus en fonction de la mode; l'originalité; d'autres techniques de couture plus avancées.

Unité Trois — L'artisanat: métiers trouvant leur origine chez différents groupes ethniques.

LA VIE FAMILIALE

La vie familiale fait essentiellement partie de chaque leçon en sciences familiales et devrait représenter le tiers du programme au cours de l'année. Il se peut que pour accommoder le programme ou pour faciliter le bon fonctionnement de l'école, il y ait avantage que l'enseignement des concepts se fasse pendant toute l'année scolaire; mais il faudrait de préférence consacrer un tiers de l'année au programme afin de traiter le sujet à fond.

Quant au choix des questions à aborder, il y a avantage à laisser les étudiants exprimer leurs propres désirs et à traiter différentes questions à mesure qu'ils y sont prêts. Les classes doivent correspondre à des besoins réels, peu importe le niveau.

Une partie importante du programme, décrite sous l'entête "A la découverte de l'enfance", a pour but de rendre les jeunes gens conscients des responsabilités de ceux qui ont à s'occuper d'enfants. Le programme comporte une participation à des activités pratiques avec des enfants d'âge préscolaire.

PREMIER CYCLE SECONDAIRE
Unité Un — Moi, une personne.
Unité Deux — L'évolution des relations personnelles.
Unité Trois — Le développement de la connaissance de soi.

La gestion des ressources personnelles

A la découverte de l'enfance
Unité Un — La joie que donne les enfants et le soin des enfants
Unité Deux — Comprendre et guider l'enfant dans sa croissance et son développement.

DEUXIÈME CYCLE SECONDAIRE
Unité Un — Le développement de la personne pendant les années adolescence.
Unité Deux — Les relations entre homme et femme.
Unité Trois — La vie à l'âge adulte.

Logement et organisation
Unité Un — Le foyer: aspects administratifs.
Unité Deux — Le logement et le style de vie.
Unité Trois — Aspect financier.

A la découverte de l'enfance
Unité Un — Le bébé.
Unité Deux — Le jeune enfant.

Un programme adapté aux moins doués est décrit dans le guide supplément "Sciences familiales pour les enfants et les jeunes en difficulté d'adaptation et d'apprentissage". Le programme comprend trois parties:

- L'alimentation;
- Le vêtement;
- La vie familiale.

Sciences humaines

Guides pédagogiques

Les sciences humaines à l'élémentaire, M à 3e année (1976)
Les sciences humaines à l'élémentaire, 4e à 6e année (1976)
Histoire, secondaire, 7e à 12e année (No 1, 1977)
La géographie au secondaire, 7e à 12e année (No 30, 1977)
Civisme et Citoyenneté, 7e à 9e année (No 44, 1979)
Etudes du Canada, 10e année (No 67, 1981)
Economie 336 et Economie 446, 11e et 12e années (No 82, 1983)
La science politique, 12e année (1984)

Suppléments

Supplément au programme des sciences humaines, 4e année (No 22, 1979)
Supplément au programme des sciences humaines, 5e année (No 27, 1980)
Supplément au programme des sciences humaines, 6e année (No 30, 1981)
Supplément — Renseignements de base sur la série *One World*, M à 6e année

Programme et descriptions de cours

Maternelle à 6e année

Le programme de sciences humaines vise à donner aux élèves un moyen de mieux comprendre et apprécier l'aspect social de la famille, de la communauté, de la province, du pays et du monde.

Le programme ne se concentre pas uniquement autour d'une orientation géographique et historique. Il s'oriente dans les aspects sociologique, anthropologique, économique et politique. Il vise au développement total de l'élève dans les domaines cognitif, affectif et psychomoteur.

Par le truchement de six grands thèmes le programme présente une séquence qui débute avec les concepts les plus familiers à l'élève: son moi, sa famille, sa communauté, sa région immédiate. A la suite il s'oriente vers l'étude des familles, des communautés et des régions à l'intérieur et à l'extérieur du Canada pour s'acheminer vers une étude plus spécifique des provinces atlantiques.

Les six grands thèmes sont:

Primaire — La découverte du moi;
Première année — Les familles;
Deuxième année — Les communautés;
Troisième année — Les communautés et les régions;
Quatrième année — L'homme dans son milieu toujours changeant;
Cinquième année — Les provinces atlantiques;
Sixième année — Population, migration, exploration.

Une bonne exploitation de ce programme fait appel aux autres disciplines scolaires telles que la langue, la musique, les sciences de la nature, les arts plastiques, la mathématique, le développement personnel et social. Les sciences humaines doivent aussi promouvoir le développement du vocabulaire. Souvent les ressources humaines du milieu de l'élève pourront offrir des connaissances et des expériences de première main.

L'évaluation se fait quotidiennement, entre autres, de l'observation du travail individuel et de groupe, des travaux écrits ou compte-rendus, des excursions, des discussions, des dessins, des modèles.

7e année

INTRODUCTION À L'HISTOIRE CANADIENNE — JUSQU'EN 1800
Ce cours de la septième année, la première moitié d'un cours de deux ans, se divise en sept unités: Unité I — Le Canada avant l'arrivée des Européens; Unité II — L'arrivée des Européens; Unité III — Les Français en Amérique du Nord jusqu'en 1660; Unité IV — Les Anglais en Amérique du Nord jusqu'en 1664; Unité V — Les Français à leur apogée en Amérique du Nord — 1660-1713; Unité VI — La conquête de la Nouvelle-France — 1713-1763; Unité VII — Les difficultés de croissance en Amérique du Nord — 1763-1800.

Chacune des unités se divise en thèmes désignés comme "à être" ou "peuvent être" enseignés. Les thèmes désignés "à être" enseignés doivent faire partie du programme de tous les élèves tout en respectant leurs besoins et leurs capacités tandis que les "peuvent être" font partie du programme orienté aux élèves des niveaux de capacités moyennes et au-dessus de la moyenne.

Les thèmes et les concepts de l'histoire acadienne sont intégrés à l'histoire canadienne. Ils peuvent constituer environ quarante pourcent du programme et ils sont présentés soit par ordre chronologique, soit d'après leur intégration aux thèmes à l'étude.

GÉOGRAPHIE DU CANADA
Ce cours fournit aux élèves un aperçu général du Canada tout en favorisant le développement des notions et des habiletés géographiques pour une meilleure compréhension du Canada. Les études portent sur diverses régions et industries choisies. Les enseignants sont encouragés à utiliser les cartes, les tableaux graphiques, les images et autres matériaux audio-visuels tels que les films sonores, les films fixes, etc.

Les neuf unités qui constituent ce cours sont: Unité 1 — Un aperçu général du Canada; Unité 2 — La région locale; Unité 3 — La région Atlantique; Unité 4 — Les Basses-Terres du Saint-Laurent et de l'Outaouais; Unité 5 — Les Basses-Terres de la région des Grands Lacs; Unité 6 — Le moyen Nord (ou l'Ontario du centre); Unité 7 — Le grand Nord; Unité 8 — l'Alsama — les plaines de l'Ouest; Unité 9 — Les cordillères et les vallées de la Colombie - Britannique.

Les études peuvent aussi être faites selon l'approche thématique. Les principaux thèmes à exploiter sont: 1 — La topographie; 2 — Le climat; 3 — La végétation; 4 — L'histoire; 5 — La population; 6 — Les industries.

Ces six grands thèmes peuvent être étudiés de deux manières: soit à l'échelle du pays, soit à l'échelle d'une région du Canada.

CIVISME ET CITOYENNETÉ: L'INDIVIDU ET LE GOUVERNEMENT LOCAL
Ce cours porte sur l'étude des divers types de communautés telles que la famille, l'école, l'église, le village, la ville, etc. Il porte aussi sur l'organisation d'un gouvernement local dans des organismes tels que l'école, le conseil des étudiants, le conseil de ville ou municipal. Il favorise le développement d'une meilleure compréhension des fonctions diverses des gouvernements locaux/municipaux.

Ce cours peut être intégré au cours d'histoire et géographie, ou il peut être enseigné comme une partie séparée du programme des sciences humaines de ce niveau.

8e année

INTRODUCTION À L'HISTOIRE CANADIENNE — DEPUIS 1800
Ce cours de huitième année, la deuxième moitié d'un cours de deux ans, se divise en sept unités: Unité I — L'Amérique du Nord britannique pendant les guerres napoléoniennes; Unité II — L'expansion de la colonisation; Unité III — Les mouvements vers une réforme politique; Unité IV — L'union de l'Amérique du Nord britannique; Unité V — L'âge de Macdonald; Unité VI — Le Canada entre dans le vingtième siècle; Unité VII — Le Canada dans le vingtième siècle.

Chacune des unités se divise en thèmes désignés comme "à être" ou "peuvent être" enseignés. Les thèmes désignés "à être" enseignés doivent faire partie du programme de tous les élèves tout en respectant leurs besoins et leurs capacités tandis que les "peuvent être" font partie du programme orienté aux élèves des niveaux de capacités moyennes et au-dessus de la moyenne.

Les thèmes et les concepts de l'histoire acadienne sont intégrés à l'histoire canadienne. Ils peuvent constituer environ quarante pourcent du programme et ils y entrent soit suivant leur ordre chronologique, soit d'après leur intégration aux thèmes à l'étude.

GÉOGRAPHIE DES ÉTATS-UNIS
Avec ce cours les élèves développent les notions et les habiletés géographiques pour une meilleure connaissance des États-Unis et des facteurs de ce pays qui jouent un rôle d'influence sur le Canada. Où possible on doit développer la compréhension des liens géographiques entre le Canada et les États-Unis.

Les neuf unités qui constituent ce cours sont: Unité 1 — Un aperçu général des États-Unis; Unité 2 — La région du Nord-Est; Unité 3 — Le Sud; Unité 4 — Le Centre-Ouest; Unité 5 —Les grandes Plaines; Unité 6 — Les Montagnes et les Plateaux de l'Ouest; Unité 7 — La côte du Pacifique; Unité 8 — L'Alaska; Unité 9 — Hawaï.

Les études peuvent aussi être faites selon l'approche thématique. Les principaux thèmes à exploiter sont: 1. La topographie; 2. Le climat; 3. La végétation; 4. L'histoire; 5. La population; 6. Les industries.

Ces six grands thèmes peuvent être étudiés de deux manières: soit à l'échelle du pays, soit à l'échelle d'une région du pays.

Les enseignants sont encouragés à utiliser des ressources audio-visuelles telles que les photos, les cartes à petite et à grande échelle, les illustrations, les données statistiques et autres moyens qui favorisent l'apprentissage et le développement des habiletés géographiques.

CIVISME ET CITOYENNETÉ: LE GOUVERNEMENT PROVINCIAL
Ce cours présente aux élèves la structure et les fonctions du gouvernement provincial, ses pouvoirs tels que disposés par l'Acte de l'Amérique du Nord britannique, ainsi que les aspects et procédures d'une élection provinciale.

Ce cours peut être intégré au cours d'histoire et géographie, ou bien il peut être enseigné comme une partie séparée du programme des sciences humaines de ce niveau.

9e année

INTRODUCTION À NOTRE HÉRITAGE EUROPÉEN
Le programme de notre héritage européen est présenté selon deux perspectives: la perspective anglaise et la perspective française. Au cours de ce programme l'élève fera l'étude de notre héritage en étudiant l'évolution historique et de la France et de la Grande-Bretagne.

L'histoire de la France et de la Grande-Bretagne fournit un bon point de départ pour l'étude de l'histoire selon l'approche thématique et/ou selon l'approche chronologique. Ces deux pays, au cours de leur évolution, se ressemblent et ils diffèrent. Ces ressemblances et différences ont exercé une influence sur le développement du Canada et de fait sur notre héritage.

Les thèmes se développent à partir de leurs origines jusqu'à nos jours. Certains recouvrent des périodes chronologiques plus étendues que d'autres. Ces thèmes sont: Thème 1 — L'évolution du gouvernement parlementaire; Thème 2 — La féodalité en France et en Grande-Bretagne; Thème 3 — La montée du capitalisme; Thème 4 — La montée de la classe ouvrière; Thème 5 — Le rôle de l'église; Thème 6 — L'évolution de l'Empire français et de l'Empire britannique; Thème 7 — Qui gouverne l'Angleterre?

Les dix unités chronologiques de ce cours sont: Unité I — Les influences de la civilisation Gréco-Romaine en Gaule et en Bretagne; Unité II — Les Francs et les Saxons; Unité III — La vie au Moyen Age en France et en Grande-Bretagne; Unité IV —Trois siècles de rivalité; Unité V — La réforme et ses conséquences; Unité VI — Les monarchies absolues; Unité VII —Les révolutions politiques; Unité VIII — La Révolution industrielle; Unité IX — Les Empires coloniaux; Unité X — Les libertés démocratiques en France et en Grande-Bretagne.

GÉOGRAPHIE DE L'EUROPE
Ce cours fournit aux élèves un aperçu général de l'Europe tout en concentrant sur les pays qui ont influencé le développement du Canada. Les études portent sur les facteurs géographiques et climatiques, sur les modes de vie et sur les industries.

Les unités qui constituent ce cours sont: Unité 1 — Introduction à l'Europe; Unité 2 — Le Royaume-Uni (Les Îles Britanniques); Unité 3 — La France; Unité 4 — Les pays méditerranéens; Unité 5 — La Scandinavie; Unité 6 — L'Europe occidentale; Unité 7 — L'Union des républiques socialistes soviétiques.

Les études peuvent aussi être étudiés de deux manières: soit à l'échelle d'un pays, soit à l'échelle d'une région géographique, voire la vallée du Rhin, les côtes de la mer du Nord.

Un emploi des ressources audio-visuelles favorisera le développement des connaissances, de la compréhension et des habiletés géographiques.

CIVISME ET CITOYENNETÉ — LE GOUVERNEMENT FÉDÉRAL
Arrivé à ce niveau les élèves ont une bonne compréhension des structures et des fonctions des gouvernements municipaux et provinciaux. Ainsi ils peuvent entreprendre une étude du système ou du gouvernement fédéral. Cette étude porte sur les structures, les fonctions, les pouvoirs, les influences, l'Acte de l'Amérique du Nord britannique, les élections et certaines relations internationales.

Ce cours peut être intégré au cours d'histoire et géographie, ou il peut être enseigné comme une partie séparée du programme des sciences humaines de ce niveau.

10e année

HISTOIRE ANCIENNE ET MÉDIÉVALE — JUSQU'AUX ANNÉES 1500: (HIS 426)
Ce cours permet aux élèves de développer une compréhension du concept de la civilisation en étudiant l'histoire de la civilisation occidentale dès l'origine de l'homme et en étudiant les diverses civilisations qui ont façonné le monde contemporain.

L'étude peut se faire selon les approches suivantes:
(1) l'approche chronologique; (2) l'approche poste-d'observation (fence-post); (3) l'approche thématique; (4) l'approche des études approfondies.

L'enseignant choisira l'approche ou une combinaison des approches suggérées qui rencontrera le mieux les besoins des élèves.

1. L'approche chronologique permet l'étude des thèmes depuis leurs origines jusqu'aux années 1500 tout en établissant leurs rapports aux situations présentes. Les six grands thèmes sont: (1) L'homme préhistorique; (2) Les civilisations anciennes (le croissant fertile); (3) La Grèce: première civilisation occidentale; (4) Rome gouverne le monde ancien; (5) Le Moyen Âge; (6) La Renaissance et la Réforme.

2. L'approche poste-d'observation (fence-post) permet à l'élève de faire la collecte des renseignements de l'histoire ancienne et médiévale. Cette approche est adaptée aux élèves qui éprouvent des difficultés en lecture ou dans le travail de recherche. Quelques-uns de ces divers postes sont: (a) les révolutions néolithique et urbaine; (b) l'art et l'architecture de l'Egypte ancienne; (c) Alexandre le Grand; (d) les forces religieuses, culturelles, économiques et politiques en jeu dans le mouvement Luthérien au début du 16e siècle.
3. L'approche thématique permet l'étude des thèmes qui constituent notre civilisation ancienne et médiévale. Les divers thèmes sont: (a) l'agriculture; (b) l'évolution d'un gouvernement; (c) la religion; (d) les révolutions; (e) les développements scientifiques et technologiques, et l'évolution de l'art.
4. Au moyen de l'approche des études approfondies l'histoire ancienne et médiévale se présente sous les cinq thèmes suivants: (a) l'apparition de l'homme civilisé; (b) l'apparition de la première civilisation occidentale; (c) l'évolution de la civilisation occidentale; (d) l'apparition des nations européennes; (e) le développement de l'homme de la Renaissance.

GÉOGRAPHIE DE L'ASIE: (GEO 326)
Ce cours sur l'Asie, comme celui sur l'Europe, fournit aux élèves un aperçu général de l'Asie tout en concentrant sur les pays qui ont influencé le développement du Canada et tout en plaçant une emphase sur les besoins des pays sous-développés et en voie de développement. Les études portent sur les facteurs géographiques et climatiques, sur les modes de vie et sur les industries.

Les unités qui constituent ce cours sont: Unité 1 — L'Asie — ses pays et ses peuples; Unité 2 — L'Asie Nordique et la République de Mongolie; Unité 3 — Le Moyen Orient; Unité 4 — L'Asie du Sud (le sous-continent Indien); Unité 5 — L'Asie de l'Est (la Chine, le Japon); Unité 6 — L'Asie du Sud-est.

Les études peuvent aussi être faites selon l'approche thématique. Les six grands thèmes sont: 1. La topographie; 2. Le climat; 3. La végétation; 4. L'histoire; 5. La population; 6. Les industries.

Ces six grands thèmes peuvent être étudiés de deux manières: soit à l'échelle d'un pays, soit à l'échelle d'une région climatique et/ou géographique, voire les îles de la Sonde, les régions rizières.

Un emploi des ressources audio-visuelles favorisera le développement des connaissances, de la compréhension et des habiletés géographiques.

ETUDES DU CANADA: (CAS 326)
Le but premier de ce cours est de fournir aux élèves les occasions de mieux comprendre ce qu'est un citoyen canadien et de connaître les libertés et les responsabilités d'un citoyen.

Les élèves auront les occasions d'identifier et d'analyser les éléments ou les questions politiques, sociologiques, économiques, culturelles et autres qui existent et qui surgissent continuellement de sorte à rendre ce pays un pays toujours changeant. Ces études lui feront connaître les éléments qui lui aideront à vivre et à participer à la citoyenneté.

Ce cours porte une diversité de domaines des sciences humaines en ayant trait entre autres à l'histoire, à l'économie, à la culture. Les sept unités de base qui constituent ce programme sont: Unité 1 — L'environnement physique; Unité 2 — Le pluralisme; Unité 3 — La vie politique; Unité 4 — La vie économique; Unité 5 — Les relations canado-américaines; Unité 6 — Le Canada dans le monde; Unité 7 — La culture canadienne.

11e année

HISTOIRE DE L'EUROPE OCCIDENTALE DEPUIS LE 16E SIÈCLE: (HIS 436)
Ce cours permet aux élèves de développer une compréhension de l'évolution de l'Europe occidentale. En raison de la flexibilité du cours de la 10e année les enseignants devront surveiller à ce que les élèves aient les connaissances et habiletés qui préparent le cours de la 11e année.

L'étude peut se faire selon l'approche thématique ou selon l'approche des études approfondies.

1. Les quatre grands thèmes pour l'approche thématique sont: (a) l'absolutisme; (b) la révolution; (c) l'idéologie; (d) les guerres mondiales et les efforts de paix. L'étude de ces thèmes peut se faire en suivant une chronologie ou en concentrant sur une région géographique
2. L'approche des études approfondies fait usage des thèmes énumérés pour l'approche thématique. Pour chacun des thèmes il est impératif de choisir les éléments pertinents afin d'assurer un déroulement logique sans négliger les étapes significatives.

ÉCONOMIE 336: ÉCONOMIE CANADIENNE (ECO 336)
Ce cours débute avec un aperçu de l'économie locale de la communauté. Cette base économique est suivie d'une étude plus approfondie de certains aspects économiques, tels que: les entreprises privées d'une certaine importance, la composition de la main-d'oeuvre, les syndicats locaux, les niveaux gouvernementaux, les défenses des gouvernements, le régime fiscal. Ensuite l'étude s'élargie à l'économie régionale et provinciale en insistant sur l'étude de l'économie des régions acadiennes et porte sur les industries du secteur primaire, secondaire et tertiaire. La distribution des richesses et des pouvoirs, le mouvement des ouvriers, la liberté de l'entreprise, les corporations de la Couronne, le régime fiscal, les liens économiques avec le reste du monde seront considérés comme partie intégrale de l'économie canadienne. Au cours de cette étude les étudiants seront initiés aux différents principes, théories et questions économiques qui affectent leur vie quotidienne.

12e année

HISTOIRE DE CANADA: (HIS 446)

Le programme de l'histoire du Canada en 12e année peut être enseigné par l'entremise de l'une ou de l'autre des trois approches suivantes: (a) l'approche traditionaliste ou centriste; (b) la perspective des provinces maritimes; (c) les relations canado-américaines.

Dans l'élaboration de ce programme chaque approche est subdivisée en une série de sujets en ordre chronologique, et chaque sujet requiert de une à deux semaines d'exploitation. En raison de l'impossibilité de tout voir dans chaque sujet il est suggéré que ce programme soit constitué d'un minimum de *douze* sujets représentant les diverses périodes chronologiques de l'histoire canadienne.

Le programme de l'histoire du Canada à ce niveau ne doit pas être une suite infinie de faits historiques, mais il doit continuellement faire appel à la compréhension, à l'analyse, à l'application et à la synthèse.

ÉCONOMIE 446: ÉCONOMIE NATIONALE ET INTERNATIONALE (ECO 446)

Ce cours comprend une étude approfondie de quelques questions économiques choisies ainsi que l'examen de certaines théories. L'unité sur la microéconomique inclue: la loi de l'offre et de la demande, les produits différentiels, la production et les marchés. La macroéconomique étudie: la finance publique, les indicateurs de l'économie et la politique gouvernementale, la monnaie, le système bancaire et financier ainsi que la croissance économique.

L'unité sur l'économie internationale comprend la distribution des richesses naturelles, les finances et les échanges internationaux ainsi que l'aide aux pays étrangers.

Il y a également deux unités facultatives: l'histoire des idées économiques et l'économie comparée.

SCIENCES POLITIQUES: (POS 446)

Le but fondamental du cours est d'amener les élèves à développer un comportement politique en leur aidant à évaluer et à préciser leurs connaissances des différents systèmes politiques, et à acquérir une meilleure compréhension du processus. Ce cours familiarisera les élèves avec les idéologies et régimes politiques comparés, avec accent sur les différents aspects du système politique canadien.

Le cours est divisé en trois parties:

première partie — les démocraties libéralistes
deuxième partie — les régimes socialistes
troisième partie — les régimes autoritaires

L'étude de la troisième partie "le régime autoritaire" est facultative. L'approche devra tenir compte à la fois du milieu et des besoins des élèves.

Le cours est destiné principalement aux élèves de la douzième année. Cependant à la discrétion des enseignants, des directeurs et des orienteurs des écoles, certains élèves de la onzième année pourraient y participer.

Sciences de la nature

Guides pédagogiques

Sciences de la nature à l'élémentaire, M à 6e année (No 4, 1977)
Sciences naturelles, 7e à 9e année (en préparation)

Programme et descriptions de cours

Maternelle à 6e année

L'enseignement des sciences de la nature à l'élémentaire vise à la compréhension des concepts fondamentaux des sciences. Cette connaissance des concepts de base se perfectionne d'après certaines activités qui mènent l'élève à acquérir et à employer certaines habiletés scientifiques: observer, classifier, employer un système d'énumération, mesurer, communiquer, prévoir, déduire, trouver des variables et, vers la fin du programme élémentaire, formuler des hypothèses, contrôler des variables, interpréter des données et faire des expériences. Le choix de sujets à étudier doit viser le perfectionnement de ces habiletés, le développement de bonnes attitudes et la présentation d'une variété de concepts scientifiques. Toute activité bien organisée provoque l'intérêt de l'élève et lui aide à bien saisir un concept.

Il est à la fois pratique et avantageux d'ordonner l'enseignement des sciences de la nature autour de centres d'intérêt qui impliquent d'autres disciplines. Cependant toute activité doit être conforme aux buts de l'enseignement des sciences et aux objectifs du programme. L'activité ne devrait pas surpasser en importance le programme même. Pendant les dernières années de l'enseignement élémentaire, l'enseignement des sciences prendra une orientation plus spécifique.

L'enseignant devrait faire un choix d'activités concrètes de nature à faire valoir les richesses des ressources naturelles du milieu environnant. L'environnement physique est abondant en côtes, en étangs, en coquillages, en marais. En contact avec ces éléments physiques et biologiques, l'élève peut observer, noter des résultats et tirer des conclusions de ce qu'il a fait ou vu. Il devrait arriver à reconnaître, respecter et apprécier les différentes variations de ces éléments.

L'étude des sciences de la nature permet à l'élève d'explorer le monde réel qui l'entoure: le monde de la technologie, de la nature, des êtres nonvivants. L'élève est curieux de nature: il observe, il interroge, il cherche des réponses dans les livres, et au moyen des activités il fait preuve d'esprit critique devant tout ce qu'il découvre. Comme les scientifiques, il doit analyser les choses à sa façon. Ainsi l'enseignement des sciences de la nature à l'élémentaire doit être orienté vers les activités dans lesquelles l'élève participe activement. Cet enseignement doit respecter le fait que l'élève interroge et par conséquent cherche une réponse.

L'enseignement des sciences de la nature à l'élémentaire doit, dans la mesure du possible, être intégré aux autres disciplines scolaires. Les arts plastiques, par exemple, pourraient permettre de concrétiser une notion scientifique et par là de la mieux saisir; certains thèmes scientifiques peuvent être utilisés comme sujet d'une communication écrite ou orale, la mesure, le calcul et l'estimation se font autant en sciences de la nature qu'en mathématique; l'étude des effets sociologiques et psychologiques qu'ont sur l'homme les changements de l'environnement est autant du domaine des sciences humaines que des sciences de la nature, et l'étude des instruments de musique peut se faire d'un point de vue scientifique.

Le programme permet à l'élève d'explorer son monde, de s'engager dans le jeu scientifique, d'utiliser tous ses sens, de manipuler des objets, d'examiner, d'étudier, d'être curieux, de poser des questions et d'acquérir des connaissances en utilisant ses aptitudes et ses habiletés. La simple mémorisation et la régurgitation ne doivent pas faire partie d'un tel programme.

Les grands thèmes du programme des sciences de la nature sont:

1. l'espace et l'univers physique
2. le temps (la durée)
3. l'énergie et ses effets
4. la matière animée et inanimée et ses propriétés
5. l'écologie
6. l'environnement physique

Aide financière pour l'étude des langues officielles

Des programmes de bourses, financés par le Secrétariat d'Etat, sont adminstrés par le ministère de l'Education.

Les buts premiers de ces programmes de bourses sont:

(a) de fournir aux Canadiens de la langue officielle de la majorité en chaque province l'occasion d'acquérir une connaissance de la deuxième langue officielle;
(b) de fournir aux Canadiens de la langue officielle de la minorité en chaque province l'occasion de recevoir leur éducation scolaire en cette langue.

Ces bourses peuvent seulement être accordées aux étudiants et aux enseignants inscrits à des cours du niveau postsecondaire dans une institution *canadienne*. (En Nouvelle-Ecosse pour être admis au Programme de bourses — cours de langues secondes, il faut avoir complété la 11e année).

Les programmes de bourses comprennent:

1. Des bourses — cours d'été de langues secondes;
2. Des bourses de voyage;
3. Des bourses pour enseignants de la langue minoritaire ou de la langue seconde;
4. Des bourses d'entrée;
5. Des bourses de perfectionnement (Fellowship).

Pour plus de renseignements et pour les formules de demande, on peut s'adresser au: Directeur adjoint, Elaboration de programmes (section française), Ministère de l'Education, C.P. 578, Halifax, N.S., B3J 2S9.

Projets spéciaux: le français langue première ou langue seconde

A certaines conditions, une commission scolaire peut recevoir de l'aide pour défrayer le coût initial accompagnant la mise sur pied d'un nouveau programme de français langue première ou langue seconde. La commission doit consentir à intégrer à son programme régulier, et à financer de façon ordinaire, tout projet réussi lors de la période d'essaie. Elle doit également consentir à suivre les directives contenus dans les guides pédagogiques du ministère de l'Education et coopérer à une évaluation du projet menée par une équipe provinciale.

Pour plus de renseignements on peut s'adresser au: Directeur adjoint, Elaboration de programmes (section française), Ministère de l'Education, C.P. 578, Halifax, N.S., B3J 2S9

Guides pédagogiques:

Les programmes des écoles acadiennes

Français

Le français à l'élémentaire, M à 6e année (édition de rodage, Nos 71 à 75, 1981)
Le jeu et l'expression dramatique à l'élémentaire (No 83, 1983)
Programme de français, 7e à 9e année (No 85, 1983)
Le français au secondaire, 7e à 12e année (1975)
Expression dramatique, 7e à 12e année (1983)
Programme de français, 10e à 12e année (en préparation)

SUPPLÉMENTS
Le roman, 7e à 12e année (No 14, 1978)
Une technique de présentation pour travaux écrits au secondaire (No 4, 1977)
Téléguide, le Monde des petits — français, M-3, pour élèves de langue française
Téléguide, Peinture et papier — français, 4e, 5e et 6e année, pour élèves de langue française

Arts visuels et arts plastiques

Arts plastiques, M à 3e année (No 64, 1981)
Arts plastiques, 4e à 6e année (No 69, 1982)

Education physique et hygiène

Education physique à l'élémentaire (No 80, 1983)
Hygiène, développement personnel et social, M à 6e année (No 31, 1978)
Hygiène, développement personnel et social, 7e à 9e année (No 61, 1980)

SUPPLÉMENTS
Le vieillissement (No 29, 1981)
Education physique, M à 3e année (1984)
Education physique, 4e à 6e année (en préparation)

Mathématiques

La mathématique à l'élémentaire, M à 6e année (No 28, 1978)

SUPPLÉMENT
Points de repère en mathématique, 3e à 6e année (No 45, 1984)

Musique

La musique à l'élémentaire, M à 3e année (No 47, 1980)
La musique à l'élémentaire, 4e à 6e année (No 86, 1984)

Sciences familiales

Sciences familiales, 7e à 12e année (No 68, 1981)

SUPPLÉMENTS
Sciences familiales pour les enfants et les jeunes en difficulté d'adaptation et d'apprentissage (No 31, 1982)
Le vieillissement (No 29, 1981)

Sciences humaines

Les sciences humaines à l'élémentaire, M à 3e année (1976)
Les sciences humaines à l'élémentaire, 4e à 6e année (1976)
Histoire, secondaire, 7e à 12e année (No 1, 1977)
La géographie au secondaire, 7e à 12e année (No 30, 1977)
Civisme et Citoyenneté, 7e à 9e année (No 44, 1979)
Etudes du Canada, 10e année (No 67, 1981)
Economie 336 et Economie 446, 11e et 12e année (No 82, 1983)
La science politique, 12e année (1984)

SUPPLÉMENTS
Supplément au programme des sciences humaines, 4e année (No 22, 1979)
Supplément au programme des sciences humaines, 5e année (No 27, 1980)
Supplément au programme des sciences humaines, 6e année (No 30, 1981)
Supplément — Renseignements de base sur la série *One World*, M à 6e année

Sciences de la nature

Sciences de la nature à l'élémentaire, M à 6e année (No 4, 1977)
Sciences naturelles, 7e à 9e année (en préparation)

Part II

[illegible]

Provincial In-Service Training Workshops

The Department's function in provincial in-service training programs is *to provide a service for school systems by assisting them to train staff to take a leadership role within certain curriculum areas as part of local in-service activities.* Although the provincial in-services are not compulsory, it should be recognized that the *intent* of these sessions is to provide training which boards will follow up locally. For this reason teachers participating in provincial in-service workshops do not, in fact, count these days as in-service days. These days are to be regarded as "time spent attending institutes or meetings called at the direction of the Minister" — see Regulations Pursuant to Section 3 of the Education Act.

Permission from the school board has to be obtained by school personnel wishing to attend an in-service session.

Education Resource Services

Education Resource Services brings together the resources of the Nova Scotia Provincial Library, Education Media Services, and the Nova Scotia Museum, under one organizational umbrella.

Nova Scotia Museum Complex

The Nova Scotia Museum Complex is made up of 21 museums across the province, with headquarters in Halifax. The museums are involved in the collection, preservation and interpretation of objects pertaining to the history and natural history of Nova Scotia.

Nova Scotia Museum
Maritime Museum of the Atlantic
Ross Farm Museum
Fisheries Museum of the Atlantic
Wile Carding Mill
Perkins House
Ross-Thomson House
Barrington Woolen Mill
Barrington Meeting House
Firefighter's Museum of Nova Scotia
North Hills Museum
Haliburton House
Uniacke House
Prescott House
Lawrence House
Balmoral Grist Mill
Sutherland Steam Mill
McCulloch House
Fisherman's Life Museum
Sherbrooke Village
Cossit House

1. School classes on various topics are given at the main branch, Halifax, up to grade 12 level. School visits are also encouraged at the other branches.

2. School loans may be borrowed from 15 distribution centres across Nova Scotia. These include multi-media kits, collection sets, slide-tapes and a variety of individual artifacts and specimens.

3. The Museum publishes a variety of books and pamphlets on Nova Scotia history and natural history.

4. Temporary and travelling exhibits from local, national or international sources are exhibited at the main branch in Halifax and at regional museums throughout the province.

5. The permanent exhibits at all 21 museum branches reflect the Nova Scotia Museum collection.

6. An identification service is available for artifacts and specimens brought in to the Museum.

7. Curatorial staff respond to individual inquiries, assist with teacher in-services, environmental education programs and the like.

8. A *Learning Resources Catalogue*, available free of charge, lists museum-related educational resources.

For further information contact: Chief Curator of Education, Nova Scotia Museum, 1747 Summer Street, Halifax, Nova Scotia B3H 3A6 (Telephone 429-4610).

School Library Services

Modern educational programs stress individualized learning. They place less emphasis on a single text and more emphasis upon learning from a variety of resources suited to the interests and learning abilities of the individual. Thus they require a variety of readily available learning materials.

The school library is an integral component of the educational program, and its goals are in harmony with those of the educational program which it serves.

The educational program gives direction, form, and substance to the school library service. The development of such services should not, however, be left to chance. Teachers and library staff share the responsibility for designing and implementing an effective program which synchronizes school library services with curricular needs and the personal needs of the students.

Today's school library, with its diversity of resources, helps students to develop the capacity for efficient and purposeful use of learning resources. Its aim is to encourage students to achieve their potential as learners, as citizens and as individuals.

Resources for schools and teachers include:

1. A consulting service regarding the establishment and development of school libraries and resource centres. The consultant is available to assist school boards, administrators and school library personnel. A small collection of print and non-print materials is maintained, covering such topics as the organization of the school library, selection and creation of resource materials, storytelling and other library programs.

   Contact: Co-ordinator, School Library Services, Nova Scotia Provincial Library, 6955 Bayers Road, Halifax, Nova Scotia B3L 4S4 or telephone 453-2810, Ext. 146.

2. The Reference Services Section of the Provincial Library offers an interlibrary loan service to school libraries, not to individual teachers. There is a collection of textbooks, previously used in Nova Scotia schools, which may be borrowed by teachers.

   Contact: Co-ordinator, Reference Services Section, Nova Scotia Provincial Library, 6955 Bayers Road, Halifax, Nova Scotia B3L 4S4 or telephone 453-2810, Ext. 127.

For further information on other Provincial Library services contact: Provincial Library at 453-2810, Ext. 122.

Education Media Services

Education Media Services combines a film library, a video and audiotape dubbing service and an audio-visual equipment repair service with a small production unit which prepares curriculum-related resources in most media for use in schools. In-house production is limited to needed resources which cannot be obtained from the sources which supply the bulk of the holdings in the two EMS libraries: private distributors, other provincial media authorities, CBC, NFB, and private industry.

A. *Resources Available* — The resources of both libraries offer a wide range to support the curriculum in most subject areas, at all grade levels, P-12. All are curriculum related. Separate catalogues of film, videotape, and audiotape holdings at EMS are available in every school in the province for the convenience of teachers wishing to borrow or copy specific titles. At present, approximately 7800, 16 mm films and 1860 videotapes are available.

B. *Distribution Arrangements — Film Library* — All film library holdings may be borrowed by mailing to the library order forms available in every school. Only long-distance telephone orders are accepted, so as to give teachers in all regions equal access to films, and all film bookings are on a first-come, first-served basis. Early booking is encouraged. Films are shipped by mail on a free return basis, except in the immediate vicinity of Halifax-Dartmouth, where the concentration of schools makes a free delivery service more economical.

Audio/Videotape Duplication — EMS holdings in audio and videotape are never loaned, in order to preserve them in good condition; however, a copy of any title in either collection will be made at no charge to any teacher requesting it. Every request must be accompanied by sufficient blank audiotape or videotape in an appropriate format. See the audio and video catalogues for the tape formats EMS can dub. All school orders are filled on a first-come, first-served basis. Copied programs include teaching guides and other support materials if they are available.

Television Broadcasts — CBC — A broad offering of EMS video holdings is broadcast over the CBC network in Nova Scotia, from 9:30-10:30 a.m., Monday to Friday, during each school year. Because class scheduling in secondary schools cannot be adapted easily to the limitations of broadcast television, these programs, with only a few exceptions, address only the P-6 school audience. Comprehensive teachers' guides and schedules for these broadcast series are mailed to all elementary schools at the beginning of each school year. Teachers are encouraged to consult these publications for specific information on the programs which will best fit their needs.

Atlantic Satellite Network — Under the current licensing agreement between the Canadian Radio and Telecommunications Commission and the Atlantic Satellite Network, the Department of Education has control of up to four hours of daily broadcast time. Though the Department makes part of this time available to post-secondary institutions throughout the Maritimes, the bulk of ASN educational broadcasts come from the EMS video library holdings. Film holdings are rarely broadcast because in most cases broadcast rights to films are prohibitively expensive. All EMS broadcasts over ASN may be copied off-air onto videotape except where specifically prohibited, and broadcast schedules are periodically sent to all school districts for distribution to teachers who may be interested in obtaining specific programs. As far as possible, the schedule is designed to reflect broadcast requests to EMS by teachers in the field.

Slide/tape and filmstrip program — A wide variety of these "small format" programs, either produced or purchased by EMS, are available to schools. A few specific titles may be purchased from the School Book Bureau at cost, but in most cases, large numbers of kits are shipped to all school districts for permanent distribution to resource centres or schools teaching the target grade levels. In each case, the number of kits varies according to the potential size of the school audience and the nature of each production's funding. Teachers should consult their resource centres and school libraries for local holdings.

C. *Equipment Repair Service* — EMS accepts for repairs any audio-visual equipment submitted by provincial schools except videotape recorder/players and computers. The EMS repair facility charges a nominal fee of five dollars per machine submitted, to cover shop materials, but no labor charges are levied. The price of any parts purchased to make the repairs is charged at cost to the school or board submitting the machine. All repairs are undertaken in order of receipt and the equipment is shipped on a free return basis, except in cases where particular boards operate a pick-up and delivery service. Many repairs are unduly delayed because parts for cheaper lines of equipment are not readily available.

For further information on any service offered by Education Media Services, please consult the various EMS catalogues, or contact:

Education Media Services (telephone) 453-2810
6955 Bayers Road
Halifax, Nova Scotia
B3L 4S4

Public School Correspondence Courses

The Nova Scotia Department of Education, through the Nova Scotia Institute of Technology Extension Services, provides the opportunity for eligible, Nova Scotian, school-age students to gain an education from grade 1 to grade 12 through public school correspondence courses.

All correspondence courses endeavor to follow as closely as is feasible the course of studies prescribed for the schools of Nova Scotia and are frequently revised to keep pace with course changes. With few exceptions, specifically selected materials from the authorized lists are used with correspondence courses.

The courses are written and evaluated by experienced educators who understand the difficulties of students who must study at home.

Correspondence courses in academic and some technical subjects are also available to adults. For detailed information with respect to eligibility contact: Vice-Principal, Extension Services, P.O. Box 1650, Halifax, Nova Scotia, B3J 2Z2.

Who May Enrol for Correspondence Instruction

Any of the following are eligible for public school correspondence courses:

1. A Nova Scotia resident who is beyond compulsory school age (16 years) and is not enrolled in a public or private school.

2. An adult who normally resides in Nova Scotia and who will be temporarily absent from the province for a period not longer than three years. An applicant who will be leaving Canada must provide the name and address of a Nova Scotia resident who will act as liaison and assume responsibility for forwarding books, lessons, and marked assignments.

3. Children (6 to 16 years of age) living in Nova Scotia who are legally excused from attending school. In such cases the application must be supported by a recommendation from the local inspector of schools. Parents wishing to apply for enrolment for a child should complete the application form and send it together with the child's last school report to the inspector who will then forward the application to NSIT Extension Services. If illness is the reason for the child's inability to attend school, the application must be accompanied by a medical certificate stating the reason for non-attendance and the approximate length of time the child will be absent from school.

4. Students attending school. The Vice-Principal Extension Services may admit a student to a grade 10, 11 or 12 correspondence course under any of the following circumstances:
   (a) The course is not offered in school.
   (b) The student is faced with timetable conflicts. In such cases applications must reach NSIT Extension Services by October 15.
   (c) The student wishes to study a subject during the summer months. In such cases, applications must reach NSIT Extension Services no later than July 10. No courses are prepared specifically as summer school courses.
   (d) Special circumstances. The special circumstances must be stated in a letter from the school principal.

In all cases courses will be available to students attending school only on the recommendation of the school principal and the superintendent of schools. The signature of the inspector of schools is required if there is no superintendent of schools. Only those students who are doing satisfactory work in their regular school program should be recommended for a correspondence course.

5. Children (at least 6 years of age) who normally reside in Nova Scotia but are temporarily living abroad with their parents or guardians. A parent applying for enrolment of a child who temporarily resides outside Canada must give the name and address of a person in Nova Scotia who will act as a liaison and assume responsibility for forwarding books, lessons and marked assignments.

Provincial Testing Programs

The Department of Education conducts two types of province-wide testing.

The Nova Scotia Standards Project is conducted annually in elementary schools. Intelligence and achievement tests are administered to a sample population in order to monitor student performance in basic skill areas.

The Nova Scotia Tests of High School Achievement are administered to students in their final years of both junior and senior high in order to determine the extent to which the educational objective and priorities of local systems or schools are being met in more than 30 specific skill areas.

The use of these tests becomes more meaningful when schools and systems have clearly delineated their aims and objectives and identified their priorities. In this way the test results may indicate to senior administrative officials those curricular areas requiring more attention and may indicate a need for reallocation of both human and material resources within their respective systems or schools. Reports are prepared and presented to every school system in the province. Any system requiring assistance in the interpretation of test results should contact the Assistant Director, Research (Testing), Department of Education, P. O. Box 578, Halifax, B3J 2S9.

The Education Incentive Program for Black Students

The Education Incentive Program for Black Students was established in 1965 by the Government of Nova Scotia.

The aim of the program is to provide financial incentives for Black students so they will be encouraged to continue their education beyond elementary school, develop leadership potential, and meet educational, career and professional objectives.

The program is divided into two categories and students are eligible for one award only.

1. University Entrance Scholarships
2. Promotion Awards — (A) Secondary, (B) Post-Secondary

For further information, write to: The Secretary, Education Incentive Program for Black Students, Department of Education, P.O. Box 578, Halifax, Nova Scotia B3J 2S9.

Financial Assistance for Official Language Studies

The Department of Education administers bursary programs funded by the Secretary of State.

The main purposes of the bursary programs are:

(a) to provide an increased opportunity for Canadians of the majority official language group in each province to acquire a knowledge of their second official language;

(b) to provide an increased opportunity for Canadians of the minority language group in each province to be educated in their own language.

Bursaries can be awarded only to students or teachers enrolled in post-secondary *Canadian* institutions. (In Nova Scotia a completed grade 11 meets the requirements for the Summer Language Bursary Program.)

These bursaries include:

1. Summer Language Bursary Program;
2. Travel Bursaries;
3. Bursaries to Second-Language and Minority-Langauge Teachers;
4. Entrance Bursaries;
5. Fellowships.

Information and official application forms may be obtained from: Assistant Director, Curriculum Development Program, (Minority Language), Department of Education, P.O. Box 578, Halifax B3J 2S9.

Special Projects: French First or Second Language

Under certain conditions, a school board may receive short-term assistance to defray initial costs necessary to set up a new French first or second language program. The board must agree to integrate into its regular program, financed in the usual way, any project which proves successful during this trial period. It must also agree to follow Department of Education program guidelines and to co-operate in an evaluation of the project by a provincial team.

For further information, contact: Assistant Director, Curriculum Development Program, (Minority Language), Department of Education, P.O. Box 578, Halifax B3J 2S9.

Teaching Guides

Television Guides

Guides for teachers using educational telecasts are available from Education Media Services, 6955 Bayers Road, Halifax, Nova Scotia B3J 1E8

List of Authorized Instruction Material

A. Elementary School
B. Junior-Senior High School
C. Matériel d'enseignement en français
D. Specialized Reading Needs and Special Education, All Levels

NOTE These lists are available through Inspectors' offices.

Art

GUIDES
Art, Primary to Six (No. 20, 1977)
Art, Grades 7-9 (No. 21, 1977)
Art, Grades 10-12 (No. 43, 1979)

SUPPLEMENTARY DOCUMENTS
Nova Scotia School Television Program Teaching Guide for Art, Levels 2 and 3
Nova Scotia School Television Program Teaching Guide for Art, Levels 4 to 6
Primary — 3 Supplementary Document (No. 37, 1982)
4-6 Supplementary Document (No. 40, 1983)

Business Education

GUIDES
Accounting (No. 54, 1980)
Office Procedures (No. 55, 1980)
Recordkeeping (No. 56, 1980)
Shorthand and Transcription, (No. 57, 1980)
Typewriting (No. 58, 1980)
Business Organization and Management (No. 62, 1980)
Business Communications (No. 66, 1980)
Consumer Education (No. 25, 1977)
Data Processing (Draft outline, 1984)
Introduction to Word Processing (Supplementary Document No. 46, 1983)
Law (No. 10, 1978)

English: Language Arts

GUIDES
Adjusted Program (Academic) — English Language Arts (No. 65, 1980)
Elementary Language Arts: An Overview (No. 28, 1980)
English Language Arts 7-12 (No. 79, 1983)
Guidelines for the Teaching of Canadian Literature (English 442) (No. 78, 1982)
Drama in the Elementary School (No. 2, 1972)
Manuscript and Cursive Writing in the Elementary School (No. 11, 1971)
Learning About Language in the Elementary School (No. 36, 1978)
Literature in the Elementary School (No. 24, 1978)
Let's Plan for Oral Language Development in the Elementary School (No. 24, 1977)
Let's Plan for Improved Listening in the Elementary School (No. 23, 1978)
Writing in the Elementary School (No. 29, 1979)
Spelling 2 to 8 (No. 26, 1978)

Writing in the Elementary School (No. 29, 1979))
Spelling 2 to 8 (No. 26, 1978)
Reading in the Elementary School; Responsibilities of Personnel in Teaching Reading P-12 (No. 29, 1978)
The Novel in Junior High School (No. 7, 1974)
Media — An Outline for Study (No. 3, 1971)
A Guide to English Language Study (No. 5, 1972)
Reading Across the Curriculum 7 to 9 (No. 29, 1978)
Language and Learning Across the Curriculum (No. 26, 1980)
Notes and Suggestions for Teaching of High School English (No. 13, 1969)
The Novel in Senior High School (No. 3, 1969)
Developmental Drama/Theatre Arts (No. 5, 1977)

ETV Guide for English Language Arts — The Story Machine, Levels P, 1, 2
ETV Guide for English Language Arts, Levels 4, 5, 6

Home Economics

GUIDES
Home Economics — A Total Program Guide (No. 2, 1977)
Home Economics: Exploring Childhood (No. 12, 1978)
Home Economics in Senior High School (No. 18, 1978)
Home Economics for Children and Youth With Exceptional Learning and Behavior Characteristics (No. 6, 1977)
Home Economics: A Program Guide for Aging (No. 7, 1978)

Industrial Arts

GUIDES
Construction Technology (No. 9, 1976)
Communications Technology (No. 12, 1977)
Manufacturing Technology (No. 23, 1977)
Industrial Arts Program Handbook (No. 49, 1980)

SUPPLEMENTARY DOCUMENTS
Industrial Arts Metric Implementation Guide (No. 6, 1978)
Industrial Arts Resource Book (No. 42, 1983)
Home Technology (No. 43, 1983)
Power Technology (No. 44, 1983)

Languages

French — Second Language

GUIDES
French Core Program — Introductory Level (No. 2, 1977)
French Core Program — Intermediate Level (No. 21, 1978)
French Core Program — Senior Level (No. 22, 1978)
French — Communications (No. 19, 1977)
Reading, French, Second Language — Introductory to Senior Levels (No. 42, 1979)
ETV Guide, *Qui est là?* for French, Levels 5 and 6

German

GUIDE
German: Grades 10, 11, 12, revised edition

Latin

GUIDE
Latin: Grades 9-12 (No. 40, 1979)

Spanish

GUIDE
Espanol: Guidelines for the Teacher (No. 4, 1976)

Law

GUIDE
Senior High School — Law (No. 10, 1978)

Mathematics

GUIDES
Adjusted Program — Mathematics (No. 53, 1980)
Mathematics P-6 (No. 17, 1977)
Mathematics Seven and Eight (No. 13, 1978)
Mathematics with Consumer Applications (No. 7, 1977)
Mathematics Nine and Ten (No. 81, 1983)
Topical Outline — Algebra and Co-ordinate Geometry (9-12) (1974)
Geometry — Topical Outline 421, 431 (1974)
Mathematics 221, 231, 241 (No. 18, 1977)
Mathematics 541 (No. 12, 1978)
Statistics 442 (No. 25, 1978)

SUPPLEMENTARY DOCUMENT
Checkpoint Strategies (No. 25, 1980)

Music

GUIDES
Music P-4 (1981)
Music 5-9 (No. 46, 1980)
Music in the Elementary School — page references to *Music; Exploring Music; New Dimensions in Music* (No. 8, 1978)
Music in High School — Part I: Theory, Ear Training, History, Vocal (No. 6, 1976)
Music in High School — Part II: Instrumental (No. 16, 1978)
A Supplementary Program for Children With Special Needs (Grades P-6) (No. 5, 1977)

Physical and Health Education

GUIDES
Physical Education, Part I — Aims and Objectives (P-12) (No. 5, 1970)
Physical Education, Part II — Series of activity guides.
Physical Education in the Elementary Schools, Book I, Levels P-3 (No. 4, 1975)
Physical Education in the Elementary Schools, Book II, Levels 4-6 (No. 8, 1976)
Health Education — Growth and Development, Levels P-6 (No. 3, 1977)
Physical Education in the Junior High School, Levels 7-9 (No. 14, 1977)
Health Education — Growth and Development, Levels 7-9 (No. 19, 1978)
Guidelines for High School Credit Physical and Health Education Program, Levels 10-12 (1974)

SUPPLEMENTARY DOCUMENTS
Fitness Development in the Public Schools
Intramural Programming in the Public Schools
Orienteering
Canoeing
Touch Football
Outdoor Education — A Resource Book — No. 23, 1980
ETV Guide, Bixby and Me I, Movement Education Levels P-1
ETV Guide, Bixby and Me II, Movement Education Levels 2-3
ETV Guide, Turtle Soup, Levels P-2
ETV Guide, Inside Out, Levels 3-4

Science

GUIDES
Adjusted Program (Academic) — Science (No. 53, 1980)
Oceanography 331 (No. 84, 1983)
Science in the Junior High Schools (No. 3, 1977)
Geology 241 (No. 9, 1977)
Physics 431, 441, 531, 541 (No. 13, 1977) (In revision)
Chemistry 431, 441, 531, 541 (No. 15, 1977)
Biology 421, 521, 441, 541 (No. 32, 1978)
Biology 221 (No. 33, 1978)
Science in the Elementary School (No. 35, 1978)
Physical Science 421 (No. 34, 1978)
Geology 441 (No. 38, 1978)
Physical Science 231 (No. 41, 1979)

SUPPLEMENTARY DOCUMENTS
SI Metric Guide for Junior and Senior High Schools (1978)
Elementary Science In-Service (1978)
Oceanography Handbook (1983)

Social Studies

GUIDES
Adjusted Program (Academic) — Social Studies (No. 63, 1980)
*Geography: Grades 7-12 (No. 3, 1973)
History: Grades 7-12 (No. 7, 1976)
Modern World Problems (No. 10, 1976)
Civics and Citizenship: Grades 7-9 (No. 11, 1978)
Canadian History and Canadian/North American Geography (No. 11, 1978)
Sociology 12 (No. 14, 1978)
Economics 11, 12 (No. 15, 1978)
Canada Studies 10 (No. 17, 1979)

Political Science 12 (No. 27, 1978)
Geography 10-12 (No. 39, 1979)
Senior High School — Law (No. 10, 1978)
Social Studies for Elementary Grade Levels (No. 77, 1981)

Special Education

GUIDES
Special Education Curriculum Guide for Trainable Mentally Handicapped Students (No. 45, 1979)
Special Education Curriculum Guide for Teachers of Educable Handicapped Students Ages 5-21 (No. 60, 1980)

SUPPLEMENTARY DOCUMENTS
Learning Disabilities Handbook, Document No. 34, 1981
Administrative Handbook — Special Education, Document No. 24

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*Only the Grades 7 and 9 are applicable. *Geography 10-12* replaces Grades 10-12.

Student Services

GUIDES

The Role and Function of Guidance Counsellors in Secondary School (No 7, 1976)
The Role and Function of Guidance Counsellors in Junior High School (No. 16, 1977)

SUPPLEMENTARY DOCUMENT

Guidance in the Classroom
A Resource Book for Adjusted Programs (Supplementary Document No 41, 1983)

Vocational Education

GUIDES

The Role and Function of Vocational School Counsellors (No. 20, 1979)
Carpentry (No. 48, 1980)
One-of-a-Kind Vocational Programs (No 6, 1980)
Applied Science (No 50, 1980)
Mathematics Courses In Secondary Vocational Schools (No 52, 1980)
Bricklaying (No 51, 1980)
Vocational Education Communications (No 59, 1980)